Initial Study / Mitigated Negative Declaration

Durst Drive Warehouse

CEQA Lead Agency

City of Rialto
Community Development Department
150 South Palm Avenue
Rialto, CA 92376

July 2022

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150 South Palm Avenue
Rialto, CA 92376

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July 2022

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LIST OF TECHNICAL APPENDICES

The documents identified below are included within the Technical Appendices to this Initial Study (IS) / Mitigated Negative Declaration (MND), and are herein incorporated by reference pursuant to CEQA Guidelines Section 15150. These documents are attached to this IS/MND (bound separately) and also are available for review at the City of Rialto, Community Development Department, 150 S Palm Avenue, Rialto, CA 92376.

A. Air Quality Impact Analysis
B. Heath Risk Assessment
C. Cultural Resources Records Search Results
D. Energy Analysis
E. Geologic Investigation
F. Greenhouse Gas Analysis
G. Phase I Environmental Site Assessment
H. Preliminary Water Quality Management Plan
I. Noise Impact Analysis
J. Traffic Impact Analysis & VMT Analysis

List of Acronyms, Abbreviations, and Units of Measure

Acronym	Definition
§	Section
amsl	Above Mean Sea Level
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
CAAQS	California Ambient Air Quality Standards
CalFire	California Department of Forestry and Fire Protection
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CDP	Conditional Development Permit
CGS	California Geological Survey
CUPA	Certified Unified Program Agency
dBA	Decibels
DOGGR	Division of Oil, Gas, and Geothermal Resources
DOSH	Division of Occupational Safety and Health
DTSC	Department of Toxic Substances Control
e.g.	For example
EAR	Environmental Assessment Review
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
Gpd	Gallons Per Day
HMBEP	Hazardous Materials Business Emergency Plan
I	Interstate
i.e	That is
ibid	In the same source
In	inch
IS	Initial Study
kBTU	kilo-British Thermal Units
LLA	Lot Line Adjustment
LST	Localized Significance Threshold
MATES V	Multiple Air Toxics Exposure Study in the South Coast Air Basin
MBTA	Migratory Bird Treaty Act
MEIR	Maximally Exposed Individual Receptor

Acronym	Definition
MEIW	Maximally Exposed Individual Worker
MHFP	Multi-hazard Function Plan
MM	Mitigation Measures
MND	Mitigated Negative Declaration
$MTCO_2e/yr$	Metric Tons of Carbon Dioxide Equivalent Per Year
n.d.	No Date
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NIMS	National Incident Management System
NOD	Notice of Determination
NOI	Notice of Intent
NO_X	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
O_3	Ozone
OEF	Other Environmental Feature
PA	Production/Attraction
PCBs	Polychlorinated Biphenyls
PM	Particulate Matter
PPD	Precise Plan of Design
REC	Recognized Environmental Condition
RFD	Rialto Fire Department
RPD	Rialto Police Department
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RUSD	Rialto Unified School District
RWQCB	Regional Water Quality Control Board
RWS	Rialto Water Services
SBTAM	San Bernardino Transportation Analysis Model
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
Sec	Second
SED	socioeconomic data
SEMS	Standardized Emergency Management System
sf	Square Feet
SMARA	Surface Mining and Reclamation Act
SRA	State Responsibility Area
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
UWMP	Urban Water Management Plan
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
WQMP	Water Quality Management Plan

1.0 INTRODUCTION

1.1 Document Purpose

This document is a Mitigated Negative Declaration (MND) prepared in accordance with the California Environmental Quality Act (CEQA), including all criteria, standards, and procedures of CEQA (California Public Resource Code Sections 21000 et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000 et seq.). This MND is an informational document intended for use by the City of Rialto, any Trustee and/or Responsible agencies, and members of the general public in evaluating the physical environmental effects of the proposed Rialto Commerce Center project (hereinafter referred to as "Project" and as described in further detail in Section 3.0 of this MND).

This MND was compiled by the City of Rialto, serving as the Lead Agency for the proposed Project pursuant to CEQA Section 21067 and CEQA Guidelines Article 4 and Section 15367. "Lead Agency" refers to the public agency that has the principal responsibility for carrying out or approving a project.

The construction and operation of the proposed Project is considered to be a "project" as defined by CEQA and, as a result, the Project is subject to the City of Rialto's environmental review process. The primary purpose of CEQA is to ensure that decision-makers and the public are aware of the environmental implications of a specific action or project and to determine whether the proposed project will have the potential to cause significant adverse impacts on the environment. As part of the proposed Project's environmental review process, the City of Rialto prepared an Environmental Assessment (Initial Study), which is included herein in Section 4.0.

1.2 Project Overview

The Project consists of applications submitted to the City of Rialto by AIREF Rialto Commerce Center LP, (hereinafter "Project Applicant") for a Conditional Development Permit (CDP 2021-0032) and Precise Plan of Design (PPD 2021-0036) (hereinafter "the Project"). These applications are collectively referred to by the City of Rialto as Master Case No. 2021-042. The Project provides for the redevelopment of an approximately 9.1-acre property located at 1230 West Durst Drive in the City of Rialto (hereinafter "Project Site") with a warehouse building containing approximately 201,239 square feet (sf) of floor area, including 191,239 sf of warehouse space and 10,000 sf of supporting office space, and associated improvements including, but not limited to, surface parking lots, drive aisles, utility infrastructure, landscaping, exterior lighting, and walls/fencing. Refer to Section 3.0, *Project Description*, for a comprehensive description of the proposed Project.

1.3 California Environmental Quality Act (CEQA)

1.3.1 CEQA Objectives

CEQA, a statewide environmental law contained in Public Resources Code Sections 21000-21177, applies to most public agency decisions to carry out, authorize, or approve actions that have the potential to adversely affect the environment. The overarching goal of CEQA is to protect the physical environment. To achieve that goal, CEQA requires that public agencies inform themselves of the environmental consequences of their discretionary actions and consider alternatives and mitigation measures that could avoid or reduce significant adverse impacts when avoidance or reduction is feasible. It also gives other public agencies and the general public an opportunity to comment on the information.

1.3.2 CEQA Requirements for a Mitigated Negative Declaration (MND)

A MND is a written statement by the Lead Agency that briefly describes the reasons why a project that is not exempt from the requirements of CEQA will not have a significant effect on the environment and, therefore, does not require preparation of an EIR (CEQA Guidelines Section 15371). The CEQA Guidelines require the preparation of a MND if the Initial Study prepared for a project identifies potentially significant environmental effects, but: 1) revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed MND and Initial Study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and 2) there is no substantial evidence, in light of the whole record before the Lead Agency, that the project may have a significant effect on the environment.

1.3.3 Initial Study Findings

Section 4.0 of this document contains the Initial Study that was prepared for the proposed Project pursuant to CEQA and City of Rialto requirements. The Initial Study determined that implementation of the proposed Project would not result in significant environmental effects to the following environmental resource areas: aesthetics, agriculture and forestry resources, air quality, greenhouse gas (GHG) emissions, hazards and hazardous materials, hydrology/water quality, land use/planning, mineral resources, noise, population/housing, public services, recreation, transportation, utilities/service systems, and wildfire. The Initial Study determined that the proposed Project would result in potentially significant effects to the resource areas of biological resources, cultural resources, geology and soils, and tribal cultural resources, but the Project Applicant has agreed to implement mitigation measures that would avoid or reduce the effects to a point where clearly no significant effects would occur. The Initial Study determined that with the incorporation of mitigation measures there is no substantial evidence in light of the whole record before the Lead Agency (City of Rialto) that the Project would have a significant effect on the environment. Based on the Initial Study's findings, the City of Rialto determined that an MND is appropriate for the proposed Project pursuant to CEQA Guidelines Section 15070(b).

1.3.4 Format and Content of Mitigated Negative Declaration

The following components comprise the MND in its entirety:

1) This document, including all sections. Section 4.0 comprises the completed Environmental Assessment/Initial Study Checklist ("Initial Study") and its associated analyses which document the reasons to support the findings and conclusions of the Initial Study. Section 5.0 comprises the Mitigation Monitoring and Reporting Program (MMRP), which lists all mitigation measures imposed on the proposed Project to ensure that the physical effects to the environment that result from implementation of the Project are reduced to less-than-significant levels. The MMRP also indicates the required timing for the implementation of each mitigation measure and identifies the parties responsible for implementing and monitoring each mitigation measure.

2) Ten technical reports that evaluate the environmental effects of the proposed Project are attached as Technical Appendices A-J and are hereby incorporated by reference pursuant to CEQA Guidelines Section 15150. Each of the appendices listed below are available for review at the City of Rialto Community Development Department, Planning Division, located at 150 South Palm Avenue, Rialto, CA 92376 and the City's website (https://www.yourrialto.com/314/Current-Projects).

Appendix A "Durst Drive Warehouse Air Quality Impact Analysis" prepared by Urban Crossroads and dated January 26, 2022.

Appendix B "Durst Drive Warehouse Mobile Source Health Risk Assessment" prepared by Urban Crossroads and dated January 26, 2022.

Appendix C "Cultural Resources Records Search" prepared by Brian F. Smith Associates, Inc. and dated August 9, 2021.

Appendix D "Durst Drive Warehouse Energy Analysis" prepared by Urban Crossroads and dated January 26, 2022.

Appendix E "Updated Geotechnical Investigation Proposed Commercial/Industrial Building 1230 West Durst Drive" prepared by Southern California Geotechnical and dated March 31, 2021.

Appendix F "Durst Drive Warehouse Greenhouse Gas Analysis" prepared by Urban Crossroads and dated January 26, 2022.

Appendix G "Phase I Environmental Site Assessment" prepared by Roux Associates, Inc. and dated April 12, 2021.

Appendix H "Water Quality Management Plan for Rialto Commerce Center" prepared by WestLAND Group, Inc. and dated June 1, 2021.

Appendix I "Durst Drive Warehouse Noise Impact Analysis" prepared by Urban Crossroads and dated January 18, 2022.

Appendix J "Durst Drive Warehouse Traffic Analysis" prepared by Urban Crossroads and dated March 17, 2022.

3) All plans, policies, regulatory requirements, and other documentation that is incorporated by reference in this document pursuant to CEQA Guidelines Section 15150.

1.3.5 Mitigated Negative Declaration Processing

The City of Rialto Community Development Department, Planning Division directed and supervised the preparation of this MND. Although prepared with the assistance of the consulting firm T&B Planning, Inc., the content contained within and the conclusions drawn by this MND reflect the sole independent judgment of the City of Rialto.

A Notice of Intent (NOI) to adopt the MND will be distributed to the following entities for review: 1) organizations and individuals who have previously requested such notice in writing to the City of Rialto; 2) owners of contiguous property shown on the latest equalized assessment roll; 3) responsible and trustee agencies (public agencies that have a level of discretionary approval over some component of the proposed Project); and 4) the San Bernardino County Clerk of the Board of Supervisors. The NOI identifies the location(s) where the MND, Initial Study, MMRP, and associated Technical Appendices are available for public review.

Following the public review period, the City of Rialto will review any comment letters received and determine whether any substantive comments were provided that may warrant revisions to the MND document. If substantial revisions are not necessary (as defined by CEQA Guidelines Section 15073.5(b)), then the MND will be finalized and forwarded to City of Rialto decision-makers for review as part of their deliberations concerning the proposed Project. If the Project is approved, the City of Rialto will adopt findings relative to the Project's environmental effects, as disclosed in this MND, and a Notice of Determination (NOD) will be filed with the San Bernardino County Clerk of the Board of Supervisors.

2.0 ENVIRONMENTAL SETTING

2.1 Project Setting

2.1.1 Project Location

Figure 2-1, *Regional Map* and Figure 2-2, *Vicinity Map*, depict the location of the Project Site. The Project Site is located at the northeast corner of South Cedar Avenue and West Durst Street, in the City of Rialto, San Bernardino County, California. The Project Site is associated with the 1230 West Durst Drive address.

The City of Rialto is located in southwestern San Bernardino County, California, south of Inyo County, east of Kern and Los Angeles Counties, and north of Riverside County. Surrounding cities include the City of San Bernardino to the east, the City of Jurupa Valley to the southwest, and the City of Fontana to the west. Regional access to the Project Site is provided via State Route 210 (SR-210) and Interstate 10 (I-10).

2.1.2 Surrounding Land Uses and Development

The Project Site generally borders industrial uses in all directions and is immediately south of San Bernardino Metrolink BNSF Railway. The land uses surrounding the Project Site are described below and illustrated on Figure 2-3, *Surrounding Land Uses and Development*.

North:
Properties to the immediate north are designated as Light Industrial (LI) and zoned as General Manufacturing (M-2). Existing uses to the north (north of the BNSF railroad tracks) include various industrial facilities, including several warehouse facilities and an engineered metal pipe manufacturing facility. Rialto Middle School and Charlotte N. Werner Elementary School are located north of Rialto Avenue and single-family residences are located farther north.

South:
Properties to the immediate south are designated as Light Industrial (LI) and zoned as General Manufacturing (M-2). Existing uses to the south include an industrial facility (steel and metals distribution) and vacant, undeveloped lots. Abutting Merrill Avenue are food service (fast food and food manufacturing) and industrial (auto services) land uses. Residential land uses are located south of Merrill Avenue.

West:
Properties to the immediate west are designated as Light Industrial (LI) and zoned as General Manufacturing (M-2). Existing uses to the west include warehousing facilities extending to Linden Avenue, followed by single family residences located farther west.

East:
Properties to the immediate east are designated as Light Industrial (LI) and zoned as General Manufacturing (M-2). Existing uses to the east include industrial facilities (warehousing, storage, and manufacturing) extending to Lilac Avenue. Curtis Elementary School and residential land uses are located farther east.

2.2 Planning Context

2.2.1 General Plan Land Use & Zoning Designations

The prevailing planning document for the Project Site and its surrounding is the City of Rialto General Plan. The City of Rialto General Plan designates the Project Site for "Light Industrial (LI)" land uses, as shown on Figure 2-4, *General Plan Land Use Map*. The LI land use designation allows for a maximum floor-to-area ratio (i.e., development intensity) of 1.0 with the intent to allow for "Light industrial activity such as processing, packaging, machinery repair, fabrication, distribution, warehousing and storage, research and development, and similar low impact uses" (City of Rialto, 2010, p. 2-10).

It bears note that the General Plan is internally inconsistent regarding its permission of warehousing within the LI land use designation as it states: "Uses specifically prohibited include warehousing, trucking and transportation related, heavy manufacturing and any use involving outdoor activities" (City of Rialto, 2010, p. 2-10). City of Rialto staff has confirmed to T&B Planning that warehousing is consistent with the LI land use designation despite the contradictory statements found in the General Plan. This interpretation appears consistent with past City practice, as there are warehouses located throughout the City on properties with a LI land use designation.

As shown on Figure 2-5, *Zoning Map*, the City of Rialto Zoning Map applies the "General Manufacturing (M-2)" zoning designation to the Project Site. Developments within the M-2 zone are subject to the standards set forth in the City of Rialto Municipal Code Section 18.42. The M-2 zone permits all uses under the City's Light Manufacturing Zone (M-1) and additional manufacturing uses. Indoor storage uses (i.e., supply chain distribution and fulfillment) are permitted within the M-2 zone pursuant to Municipal Code Section 18.112. The property also is located in the Rialto Avenue-Cedar Avenue Corridor Commercial Overlay Zone. The purpose of this zone is to allow commercial retail and administrative-professional office uses to be located on appropriate M-1 (Light Manufacturing) or M-2 (General Manufacturing) zoned properties having frontage on portions of Rialto Avenue and Cedar Avenue.

2.3 Existing Site Conditions

Pursuant to CEQA Guidelines Section 15125(a)(1), the physical environmental condition for purposes of establishing the setting of a MND is the environment as it existed at the time the Lead Agency commences the environmental analysis for a project. The City of Rialto began the environmental review for the Project in July 2021; therefore, the environmental setting for the proposed Project is defined as the physical environmental conditions on the Project Site and in the vicinity of the Project Site as they existed as of that approximate date.

2.3.1 Land Use

Under existing conditions, the Project Site is vacant, as shown on Figure 2-6, *Aerial Photograph*. Recently, the Site was occupied by the Southland Pipe Corporation for the manufacture and storage of steel and cement-lined pipe and associated fittings. The Project Site is accessed via two driveways from Durst Drive.

2.3.2 Aesthetic and Topographic Features

The City of Rialto's scenic qualities include views of the San Gabriel and San Bernardino Mountains (City of Rialto, 2010, p. 2-22); the Project Site does not offer prominent, unobstructed views of either scenic resource due to existing off-Site development and on- and off-Site landscaping.

The Project Site slopes gently to the south, with an average elevation of approximately 1230 feet above mean sea level (amsl) (refer to Figure 2-7, *USGS Topographic Map*) and does not contain unique topographic or aesthetic features, such as rock outcroppings or native trees. As shown on Figure 2-8 through 2-10, *Site Photographs*, the aesthetic character of the Project Site is that of an industrial site completely surrounded by roadways and other developed properties. Almost the entirety of the Project Site's frontages along Cedar Avenue and Durst Drive contains a solid wall and ornamental, non-native landscaping which obstruct views into the Project Site. The structures located on the Project Site are partially visible over the solid wall and through the landscaping. Wood power poles with overhead electrical distribution lines and street lights (mounted to the power poles) are present along South Cedar Avenue.

2.3.3 Site Access and Circulation

The Project Site abuts Cedar Avenue (a north-south oriented roadway) along the Site's western boundary and Durst Drive (an east-west oriented roadway) along the Site's southern boundary. Under existing conditions, there are two private driveways that connect the Project Site to Durst Drive.

The Project Site is located approximately 1.8-miles (driving distance) north of Interstate 10 (I-10) and 3.0-miles (driving distance) south of Interstate 210 (I-210). I-10 and I-210 are east-west oriented freeways that connect to Interstate 15 (I-15) and Interstate 215 (I-215) for north-south freeway access. I-10, I-210, I-15, and I-215 are part of the State highway system operated by the California Department of Transportation (Caltrans).

2.3.4 Air Quality and Climate

The Project Site is located in the 6,745-square-mile South Coast Air Basin (SCAB), which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The SCAB is bound by the Pacific Ocean to the west, the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and the San Diego County Line to the south. The SCAB is within the jurisdiction of South Coast Air Quality Management District (SCAQMD), the agency charged with bringing air quality in the SCAB into conformity with federal and state air quality standards. The climate of the SCAB is characterized as semi-arid and more than 90% of the SCAB's rainfall occurs from November through April. During the dry season, which also coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, characterized by a daytime onshore sea breeze and a nighttime offshore drainage wind. (Urban Crossroads, 2022a, pp. 8-9)

In the Project region, the SCAB does not attain State and/or federal standards established for one-hour and eight-hour Ozone (O_3) concentrations and particulate matter (PM_{10} and $PM_{2.5}$) concentrations. Local air quality in the vicinity of the Project Site has exceeded air quality standards for one-hour and eight-hour ozone concentrations and particulate matter concentrations within the last three years, as recorded at the nearest air monitoring station to the Project Site (Central San Bernardino Valley 1 monitoring station source receptor area [SRA] 34) (Urban Crossroads, 2022a, p. 21). Refer to Table 2-4 in the Project's air quality report (see to *Technical Appendix A*) for a summary of air quality conditions in the vicinity of the Project Site over the previous three years.

The SCAQMD calculated cancer risks within the SCAB in their *Multiple Air Toxics Exposure Study V* (*MATES-V*). The Project Site is located within a quadrant with a predicted excess cancer risk of 455 in one million (Urban Crossroads, 2022a, p. 36).

2.3.5 Geology

There are no known active or potentially active earthquake faults on the Project Site or in the immediately surrounding area, and the Project Site is not located within an "Alquist-Priolo" Special Studies Zone (City of Rialto, 2010, p. 5-3). Significant faulting occurs along the Lytle Creek Wash area of the City of Rialto. The San Andreas fault crosses to the northeast, through the City of San Bernardino. The City of Rialto sits atop the Pacific Plate, which is moving north relative to San Bernardino. As presented on Exhibit 5.1 of the City's General Plan, the City of Rialto has the potential of ground shaking resulting from the San Jacinto, San Andreas, Cucamonga, Lytle Creek, and Rialto-Colton fault lines (City of Rialto, 2010, p. 5-2).

Groundwater was not encountered in any of the test excavations of the Project Site; nearby monitoring well data suggests that groundwater is located approximately 223 feet below the ground surface in the vicinity of the Project Site (SoCalGeo, 2021, p. 7).

2.3.6 Soils

According to a geotechnical investigation conducted by Southern California Geotechnical (SoCalGeo), soils encountered at the Project Site include artificial soils, consisting of medium dense silty sands with varying fine gravel content, extending to depths of 2.5 to 5.5 feet below the existing surface. The fill soils are underlain by native alluvium which possess unfavorable consolidation/collapse characteristics to depths of 4 to 5 feet below the existing site surface (SoCalGeo, 2021, p. 6).

2.3.7 Hydrology

The Project Site is located in the Santa Ana River watershed, which drains an approximately 2,650 square-mile area and is the principal surface flow water body within the region. The Santa Ana River starts in the San Bernardino Mountains, approximately 23 miles northeast of the Project Site, and flows southwesterly for approximately 96 miles across San Bernardino, Riverside, and Orange counties before spilling into the Pacific Ocean.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 06071C8657H, the Project Site is within "Flood Zone X (Unshaded)" which corresponds with areas of minimal flood hazard (less than 0.2-percent annual chance of flood) (FEMA, 2008).

2.3.8 Noise

The primary source of noise in the Project Site vicinity includes vehicle noise along Cedar Avenue and noise generated from the surrounding businesses. Based on 24-hour noise measurements collected by the consulting firm Urban Crossroads on July 13th, 2021, 24-hour ambient noise levels in the Project area range between 51.6 equivalent decibels (dBA Leq) and 67.9 dBA Leq. (Urban Crossroads, 2022e, p. 24)

2.3.9 Utilities and Service Systems

The Project Site and surrounding area receives domestic water service from the City via Rialto Water Services (RWS). Wastewater generated on the Project Site is collected by the City of Rialto's local sanitary sewer system, for conveyance to the Rialto Wastewater Treatment Plant (RWTP). Existing sewer and water lines are located beneath Cedar Avenue.

Under existing conditions, the Project Site does not contain any stormwater drainage facilities. Stormwater runoff from the Site discharges to Cedar Avenue, where it is captured by existing catch basins and conveyed to an existing storm drain beneath Cedar Avenue.

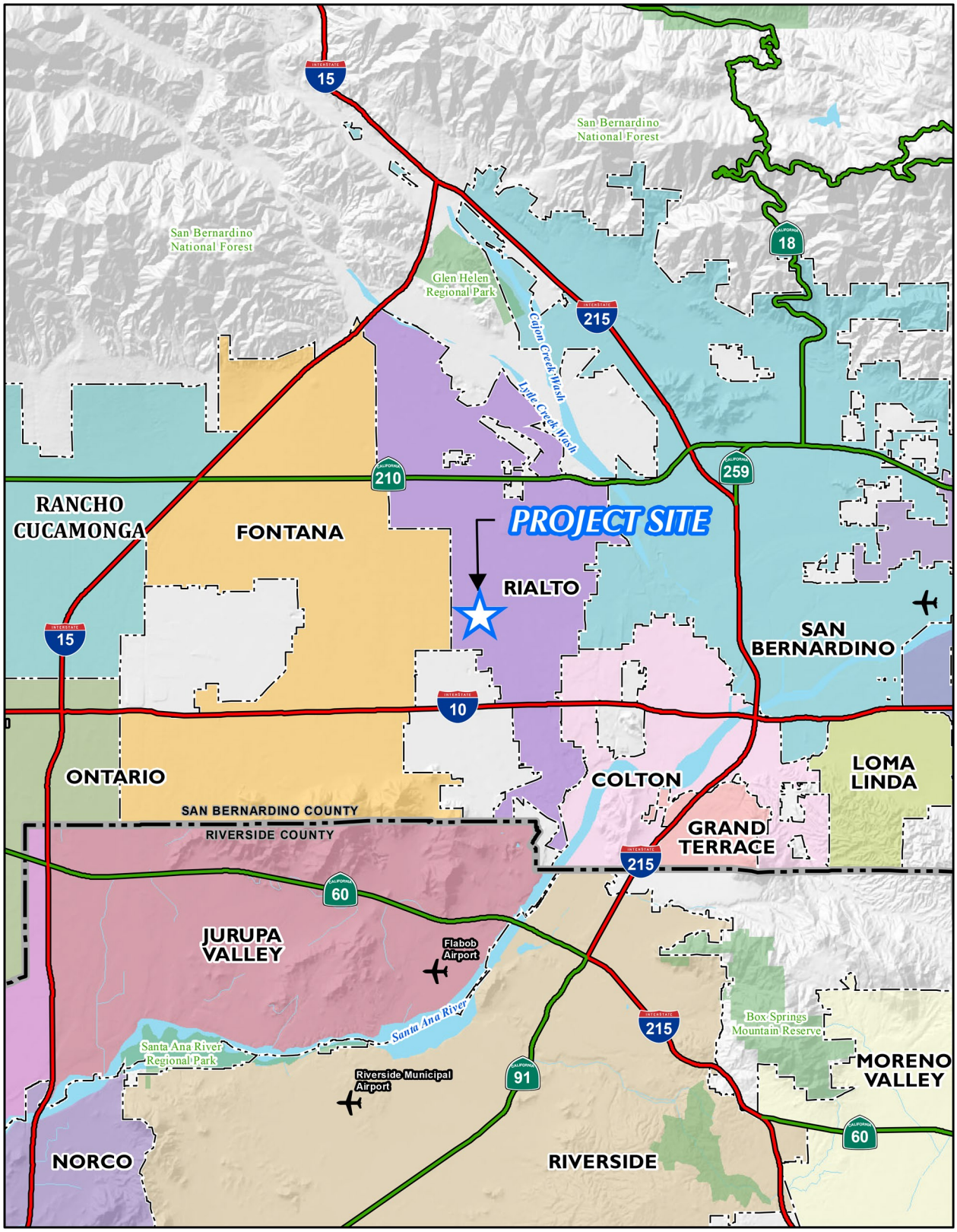
Under existing conditions, power lines and power poles owned by Southern California Edison are present along the Project's frontage with Cedar Avenue.

The Mid-Valley Landfill in the City of Rialto is the facility that processes solid waste collected in the City of Rialto. The Mid-Valley Landfill is permitted to accept 7,500 tons of waste per day.

2.3.10 Vegetation and Wildlife

The Project Site consists of developed/disturbed land. No native vegetation exists on the Project Site. All vegetation located on-Site is ornamental, non-native plant materials.

Given the level of disturbance on the Project Site, no fish, amphibian, reptile, or mammal species are expected to utilize the Project Site; however, avian species could utilize the Site for roosting or nesting.

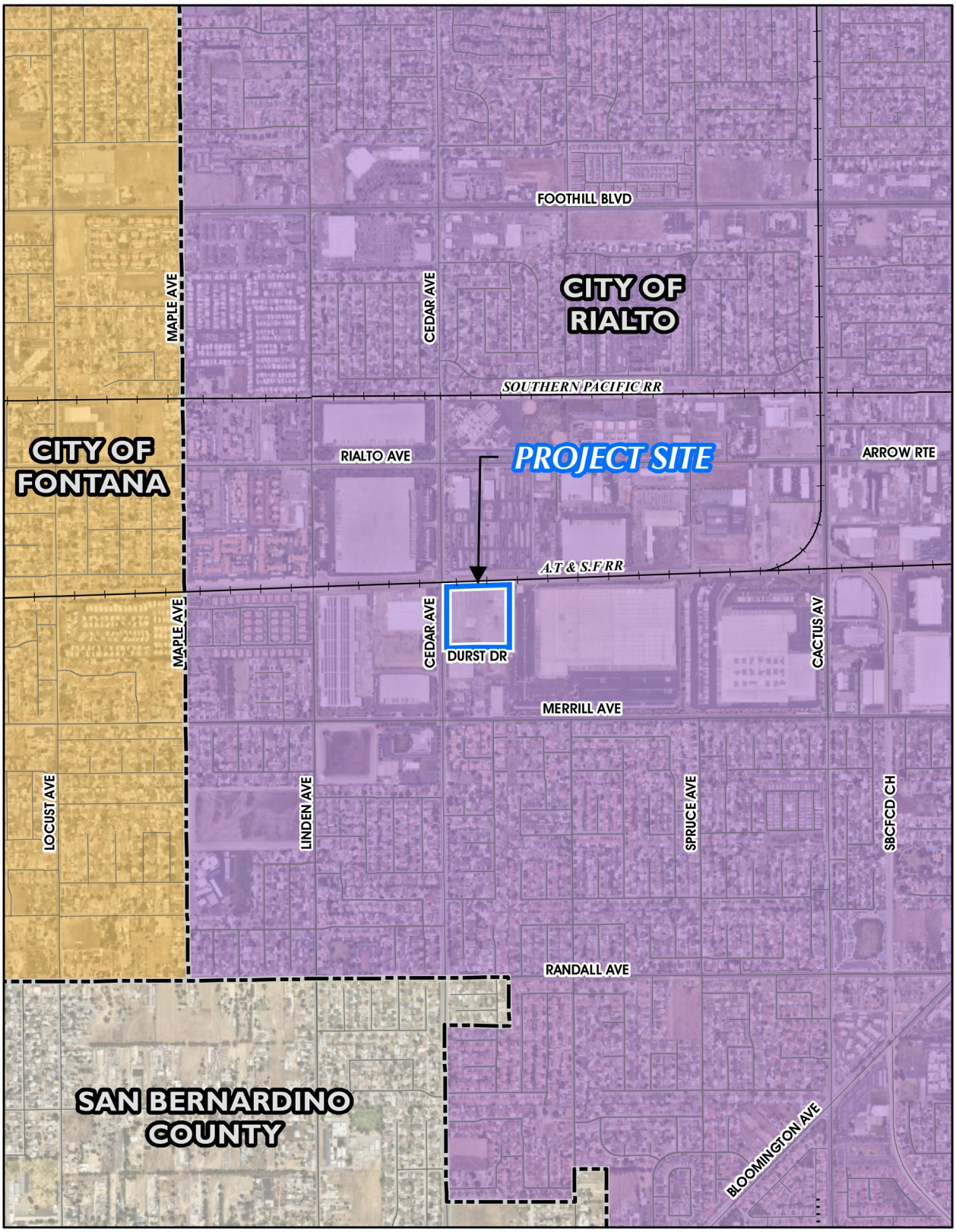


Source(s): ESRI, RCTLMA (2020), SB County (2020)

Figure 2-1

0 0.75 1.5 3 Miles

Regional Map



Source(s): ESRI, Nearmap Imagery (2021), SB County (2020)

Figure 2-2

0 375 750 1,500 Feet

Vicinity Map

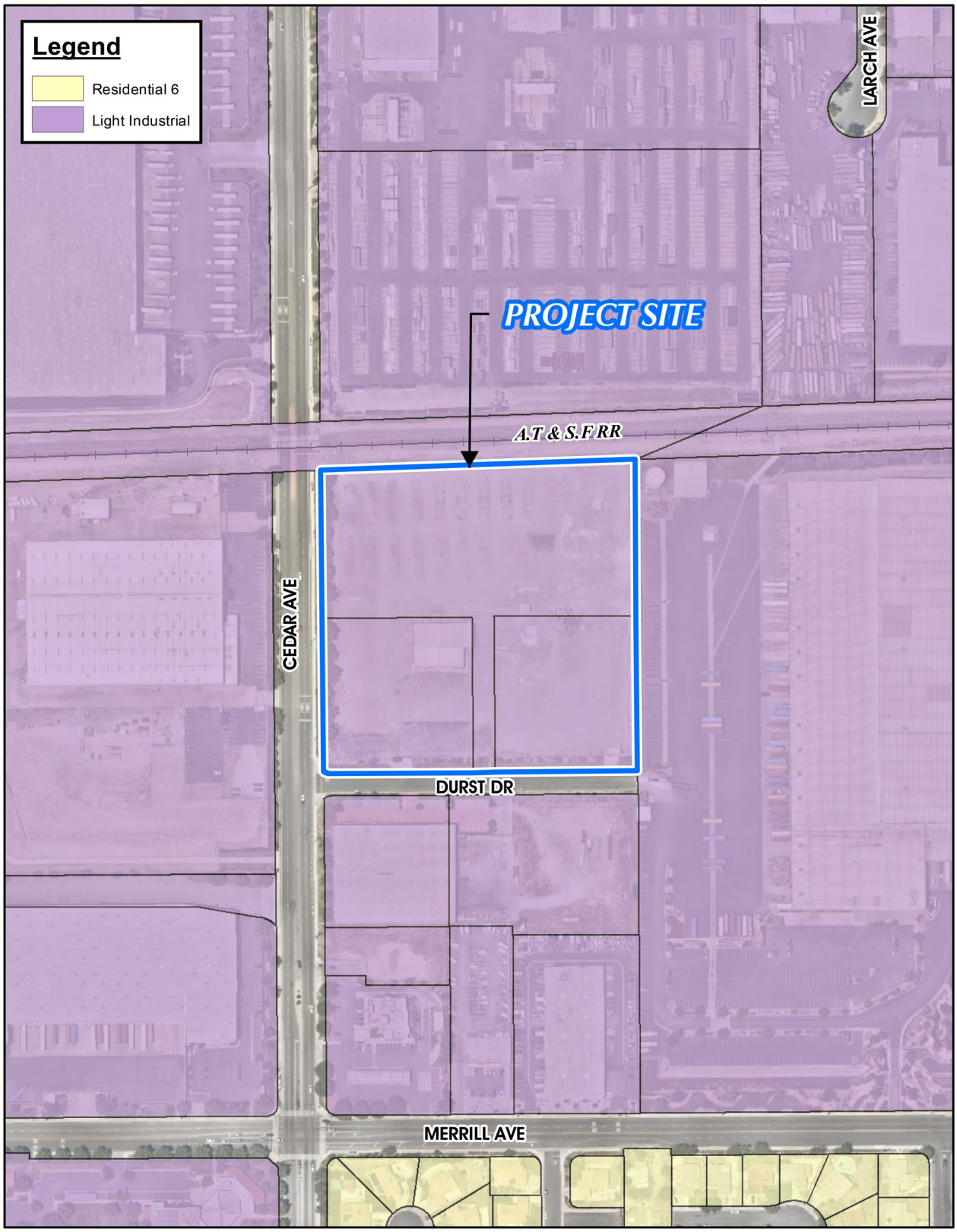


Source(s): ESRI, Nearmap (2022), SB County (2020)

Figure 2-3

0 150 300 600 Feet

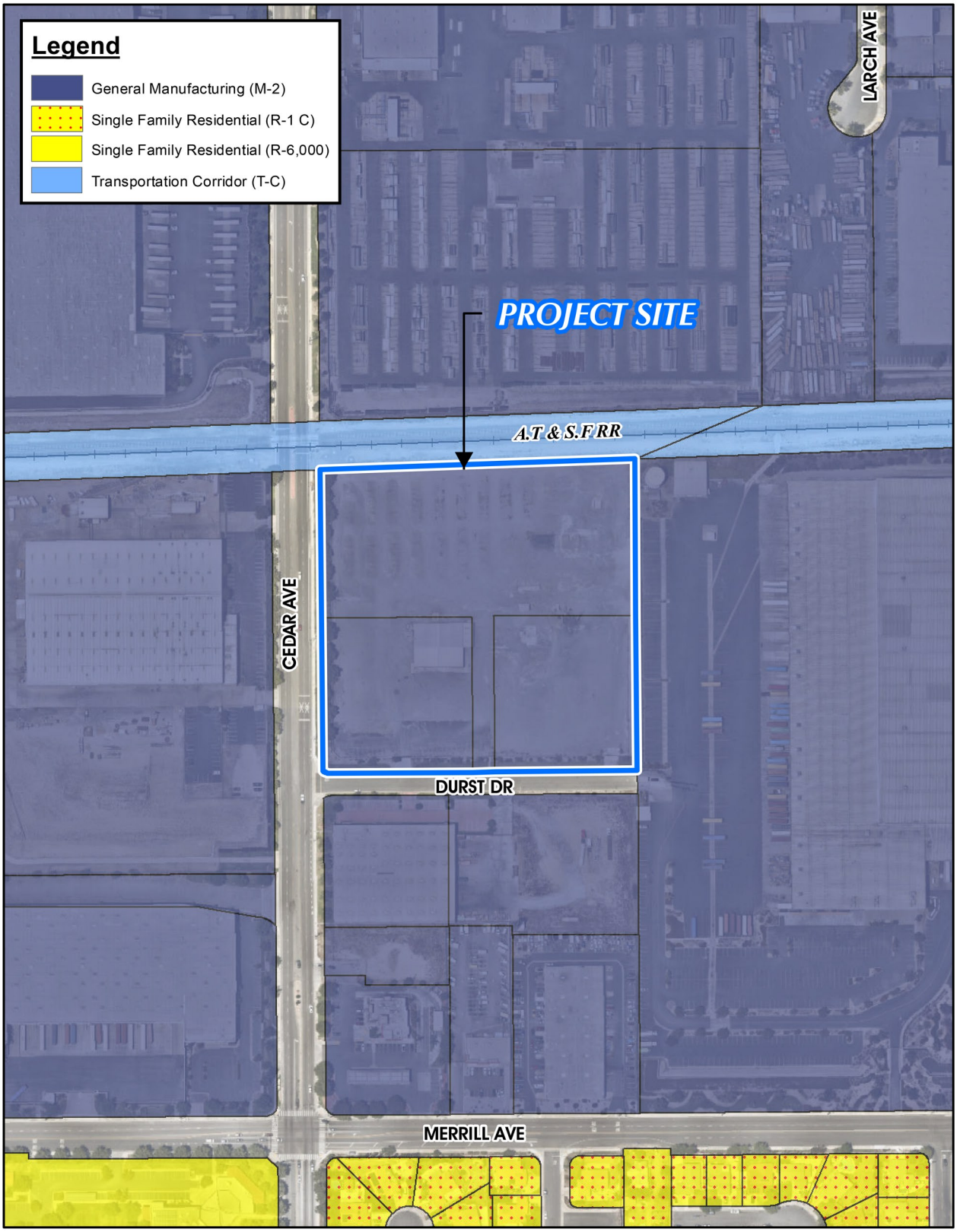
Surrounding Land Uses and Development



Source(s): ESRI, Nearmap (2022), SB County (2020)

Figure 2-4

General Plan Land Use Map



Source(s): ESRI, Nearmap (2022), SB County (2020)

Figure 2-5

Zoning Map

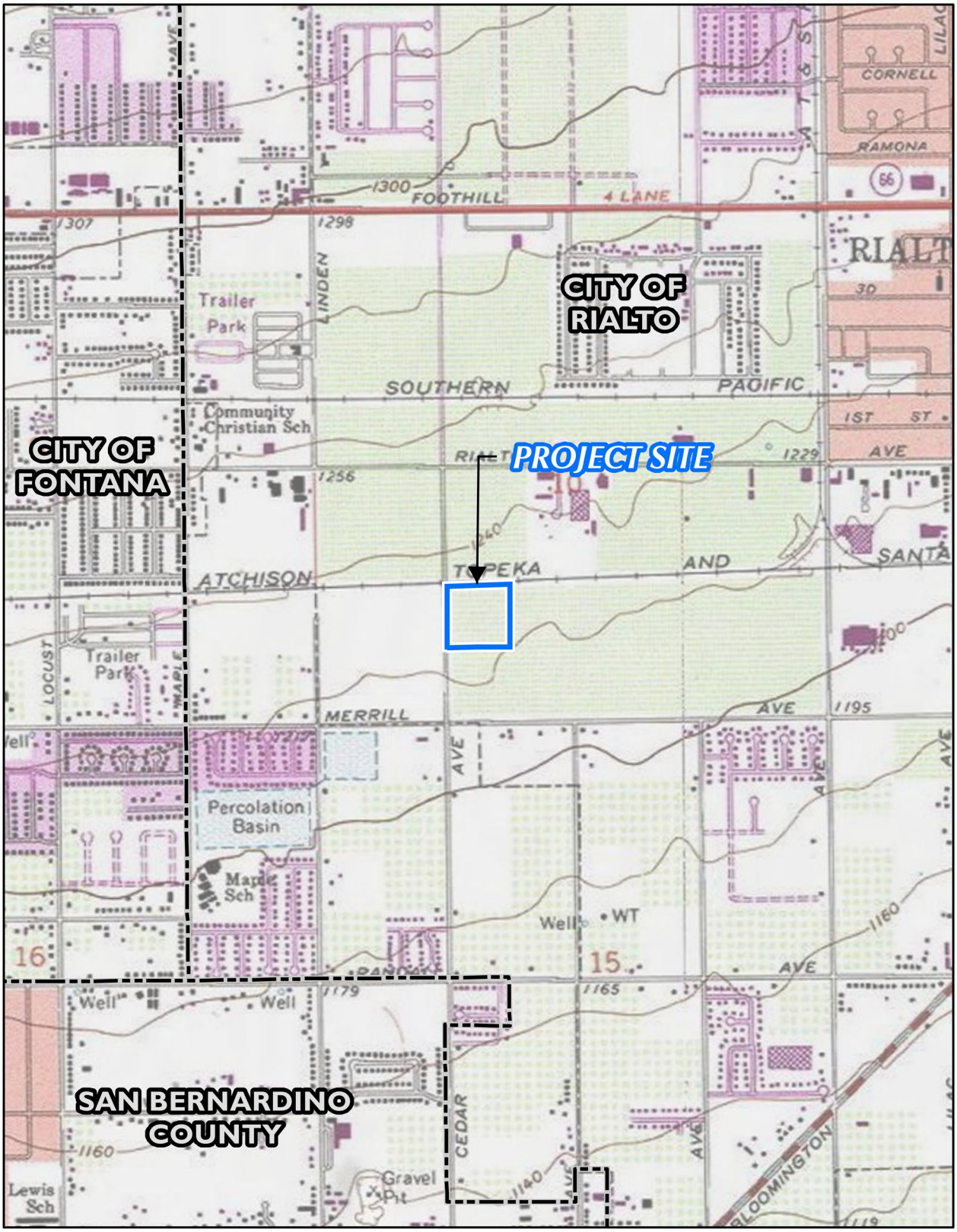


Source(s): ESRI, Nearmap (2022), SB County (2020)

Figure 2-6

0 75 150 300 Feet

Aerial Photograph



Source(s): ESRI, USGS (2013)

Figure 2-7

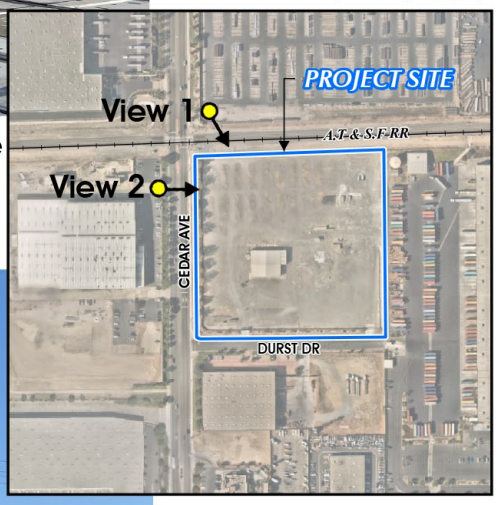
0 375 750 1,500 Feet

USGS Topographic Map



View 1: Looking Southeast towards the Project Site from North side of the A.T & S.F Railroad Line.

Key Map





View 2: Looking East towards the Project Site from the West side of Cedar Avenue.

Figure 2-8

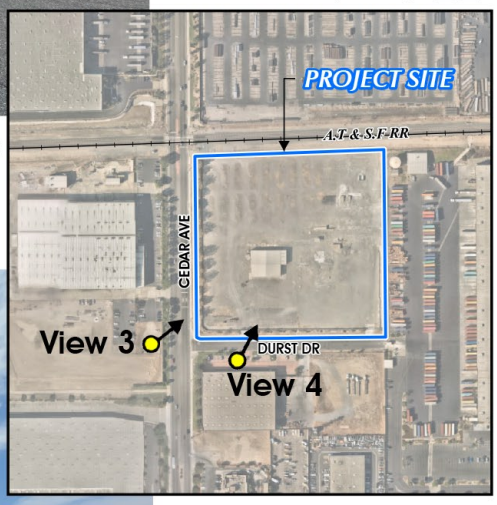
Not to Scale

Site Photographs



View 3: Looking Northeast towards the Project Site from the Southwestern side of Cedar Avenue at the intersection of Durst Drive.

Key Map





View 4: Looking Northeast towards the Project Site from the Southern side of Durst Avenue.

Figure 2-9

Not to Scale

Site Photographs



View 5: Looking North towards the Project Site from the Southern side of Durst Drive.

Key Map



Figure 2-10

Not to Scale

Site Photographs

3.0 PROJECT DESCRIPTION

The Project evaluated by this MND is located within the City of Rialto, San Bernardino County, California. The proposed Project consists of applications for a Conditional Development Permit (CDP 2021-0032) and Precise Plan of Design (PPD 2021-0036). These applications are collectively referred to by the City of Rialto as Master Case No. 2021-042. Copies of the entitlement applications for the proposed Project are herein incorporated by reference pursuant to CEQA Guidelines Section 15150 and are available for review at the City of Rialto Community Development Department, Planning Division counter, located at 150 South Palm Avenue, Rialto, CA 92376. A detailed description of the proposed Project is provided in the following sections. Additional discretionary and administrative actions that would be necessary to implement the proposed Project are listed in Table 3-2, *Matrix of Project Approvals/Permits*, at the end of this section.

3.1 Proposed Discretionary Approvals

3.1.1 Conditional Development Permit (CDP 2021-0032)

A Conditional Development Permit is required for proposed warehouse land uses in the City pursuant to Rialto Municipal Code Section 18.112, *Indoor Storage Uses*. The Conditional Development Permit provides the City a mechanism to ensure that the various development standards (related to site and architectural design, parking and access, screening, landscape, and security) and performance standards (related to vehicle routing and queuing, trucking activity, and maintenance) that are established by Municipal Code Section 18.112 and are intended to lessen the effects of warehouse land uses on adjacent properties are complied with.

3.1.2 Precise Plan of Design (PPD 2021-0036)

A. General Description

The Project Applicant proposes construction and operation of a warehouse building with approximately 201,239 sf of floor area on the subject property. As shown on Figure 3-1, *Conceptual Site Plan*, the proposed building would contain 191,239 sf of warehouse floor space and contain up to two office spaces with a combined total area of 10,000 sf (located at the northeast and/or southeast corners of the building).

Vehicular access to the Project Site would be provided by two (2) limited-access driveways on Cedar Avenue and one (1) full-access driveway along Durst Drive. The northern driveway on Cedar Avenue could be utilized be passenger vehicles and trucks but would be restricted to right-in/left-out turn movements while the southern driveway on Cedar Avenue would be restricted to passenger vehicle traffic only and right-in/right-out turn movements. The driveway on Durst Drive could be utilized by passenger vehicles and trucks and there would be no restrictions on turning movements to enter or exist the Project Site.

B. Parking and Loading

The Project would provide 141 passenger vehicle parking spaces distributed primarily on the western portion of the Project Site, adjacent to Cedar Avenue; additional, limited passenger vehicle parking would be provided on the northern portion and southeast corner of the Project Site. An enclosed truck court – used for the loading and unloading of goods and short-term trailer parking – with 26 loading docks (also called "bays") and 41 truck trailer parking stalls on the east side of the Project Site. Because the Project Applicant is pursuing the Project on a speculative basis, meaning the future occupant(s) of the building is not known at the time of writing this Initial Study/MND, the number of automobile and truck trailer

parking spaces are identified as approximate to acknowledge the possibility of parking lot striping revisions in the future to accommodate the needs of future building occupants.

Bicycle parking spaces ("racks") would be provided adjacent to the proposed office locations in conformance with Rialto Municipal Code Section 18.58.050, *Office, commercial and industrial parking requirements*.

C. Architecture

Figure 3-2, *Conceptual Architectural Elevations*, depicts the proposed architecture design for the Project. The proposed warehouse building would be constructed to a maximum height of approximately 45 feet above finished grade (including decorative architectural features). The building would be constructed with painted concrete tilt-up panels and low reflective, blue-glazed glass. Articulated building elements, including parapets, varied rooflines, wall recesses, mullions and aluminum canopies, are proposed as decorative elements – primarily at the building corners and along Cedar Avenue and Durst. The exterior color palette for the proposed building is primarily white and includes various neutral, grayscale pattern tones.

D. Landscaping

The conceptual landscape plan for the Project Site is illustrated on Figure 3-3, *Conceptual Landscaping Plan*. Proposed landscaping would be ornamental in nature and would feature trees, shrubs, accents, and groundcover. As shown on Figure 3-3, trees and groundcover would be massed along the Project Site's frontage with Cedar Avenue and Durst Drive. Landscaping would also occur at building entries and in and around automobile parking areas.

Prior to the issuance of a building permit to construct the Project Site, the Project Applicant/Developer or Project Site owner would be required to submit final planting and irrigation plans to the City of Rialto for review and approval. The plans are required to comply with Chapter 12.50, *Water Efficient Landscape Requirements*, of the Rialto Municipal Code, which establishes requirements for landscape design, automatic irrigation system design, and water-use efficiency.

E. Walls and Fences

The existing concrete wall along the Project Site's western and southern boundaries would be removed, and an 8-foot-tall wrought iron fence would be installed along the segments of Project Site's northern and eastern boundaries that abut the truck court for security. A 12-foot-tall concrete would extend from the southeastern corner of the proposed warehouse building, oriented parallel to Durst Drive, to screen views of the truck court from Durst Drive.

3.2 Project Improvements

3.2.1 Public Roadway Improvements

The existing public street network abutting the Project Site consists of Cedar Avenue to the west and Durst Drive to the south.

Under existing conditions, the eastern half of Cedar Avenue is constructed to its ultimate half-section abutting the Project Site. The Project would shorten the existing center median located on Cedar Avenue near the northwest corner of the Project Site to facilitate left turns into the Project Site from vehicles

traveling south on Cedar Avenue and would introduce two new driveways as shown on Figure 3-1. Lastly, the Project would install a new streetlight along the Site's frontage with Cedar Avenue.

Under existing conditions, the vehicular travel way along the northern half of Durst Drive is constructed to its ultimate half-section-width abutting the Project Site. The Project would introduce a proposed cul-de-sac near the southeast corner of the Project Site, close the two existing driveways to the Site and introduce a new driveway as shown on Figure 3-1, construct a sidewalk along the entire Site frontage with Durst Drive, and re-locate an existing streetlight along the Site's frontage with Durst Drive.

3.2.2 Utility Improvements

A. Water Infrastructure

The Rialto Water Services (RWS) would provide water service to the Project Site. As depicted on Figure 3-4, *Conceptual Utility Plan*, two connection points are proposed to an existing 12-inch-diameter water main installed beneath Cedar Avenue for indoor, outdoor (i.e., landscape irrigation), and fire protection (i.e., fire hydrant) services. All proposed water facilities would be designed and constructed in accordance with RWS standards.

B. Sanitary Sewer Infrastructure

The City of Rialto would provide wastewater conveyance services to the Project Site. As depicted on Figure 3-4, the Project would connect to the existing 12-inch-diameter main within Cedar Avenue. All proposed wastewater facilities would be designed and constructed in accordance with the City's standards.

C. Stormwater Drainage Infrastructure

The Project's proposed storm drain system would consist of a network of catch basins, gutters, underground storm drain pipes, and an underground corrugated metal pipe (CMP) infiltration system (to be located east of the proposed building, under the truck court) that would collect and treat stormwater runoff (as needed) before discharging runoff flows from the property. "First flush" stormwater runoff flows (i.e., typically the first ¾-inch of initial surface runoff after a rainstorm, which contains the highest proportion of waterborne pollution) would be collected by the proposed catch basins and routed through a hydrodynamic separator before flowing into the underground infiltration basin located within the truck court. The hydrodynamic separator is a stormwater treatment device that separates floatables (e.g., trash, debris, and oil) and settleable particles, like sediment, from stormwater runoff. The stormwater that flows into the underground infiltration basin would ultimately percolate into the ground. Stormwater runoff captured after the first flush would bypass the underground infiltration basin would be routed to Durst Drive through a new concrete channel and existing parkway drain at the southeast corner of the site.

D. Dry Utilities

The Project provides for the removal of three (3) existing above-ground transmission line poles along Cedar Avenue and the undergrounding of the associated above-ground electric distribution lines. The Project also provides for the re-location of an existing Southern California Edison (SCE) handhole and meter pedestal adjacent to Cedar Avenue. All modification to SCE facilities would be performed in coordination with SCE.

3.3 Construction Characteristics

The Project Applicant anticipates that Project construction will span a period of 10 months. Demolition of on-Site structures and improvements would occur first, followed by site preparation, then mass-grading and installation of underground infrastructure and retaining walls. Next, fine grading would occur, surface materials would be poured, and the proposed building would be erected, connected to the underground utility system, and painted. Lastly, landscaping, fencing, screen walls, lighting, signage, and other site improvements would be installed. The equipment the Project Applicant expects to utilize during Project construction are summarized in Table 3-1, *Construction Equipment Assumptions*.

Table 3-1 Construction Equipment Assumptions

Construction Activity	Equipment	Amount	Hours Per Day
Demolition	Excavators	2	8
	Skid Steer Loaders	1	8
Site Preparation	Crawler Tractors	4	8
	Rubber Tired Dozers	3	8
Grading	Crawler Tractors	3	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
Building Construction	Cranes	1	8
	Crawler Tractors	3	8
	Forklifts	3	8
	Generator Sets	1	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

The Project's proposed construction activities would result in physical disturbance to the entire Project Site. Other than the roadway and utility improvements described above, no other off-Site physical impacts are anticipated as part of the Project.

Prior to the start of grading, all existing vegetation, and debris, including structures, footings, foundations, rubbles, trees, and root systems shall be removed from the site. Earthwork activities associated with Project construction would result in approximately 67,323 cubic yards of cut and 51,388 cubic yards of fill, resulting in the need of 15,935 cubic yards of imported fill soils. When grading is complete, the building pad would sit approximately 1,226 feet above mean sea level (amsl) and the property would have a gentle slope from northeast to southwest. After grading, the highest point of the Project Site would be its

northeast portion (approximately 1,236 feet amsl) and the lowest point of the property would be its southeast corner (approximately 1,217 feet amsl). The Project's grading concept is illustrated on Figure 3-6, *Conceptual Grading Plan*.

3.4 Operational Characteristics

The user of the Project is not known at this time but the Project Applicant anticipates that the proposed building will be occupied by a warehouse distribution/logistics operator and used for short-term storage. Hazardous materials storage is not expected to occur within the building or on the Project Site; however, small quantities of hazardous chemicals and/or materials – including but not limited to aerosols, cleaners, fertilizers, lubricants, paints or stains, solvents, and fuels (e.g., gasoline, propane) – could be utilized during routine Project operations and maintenance.

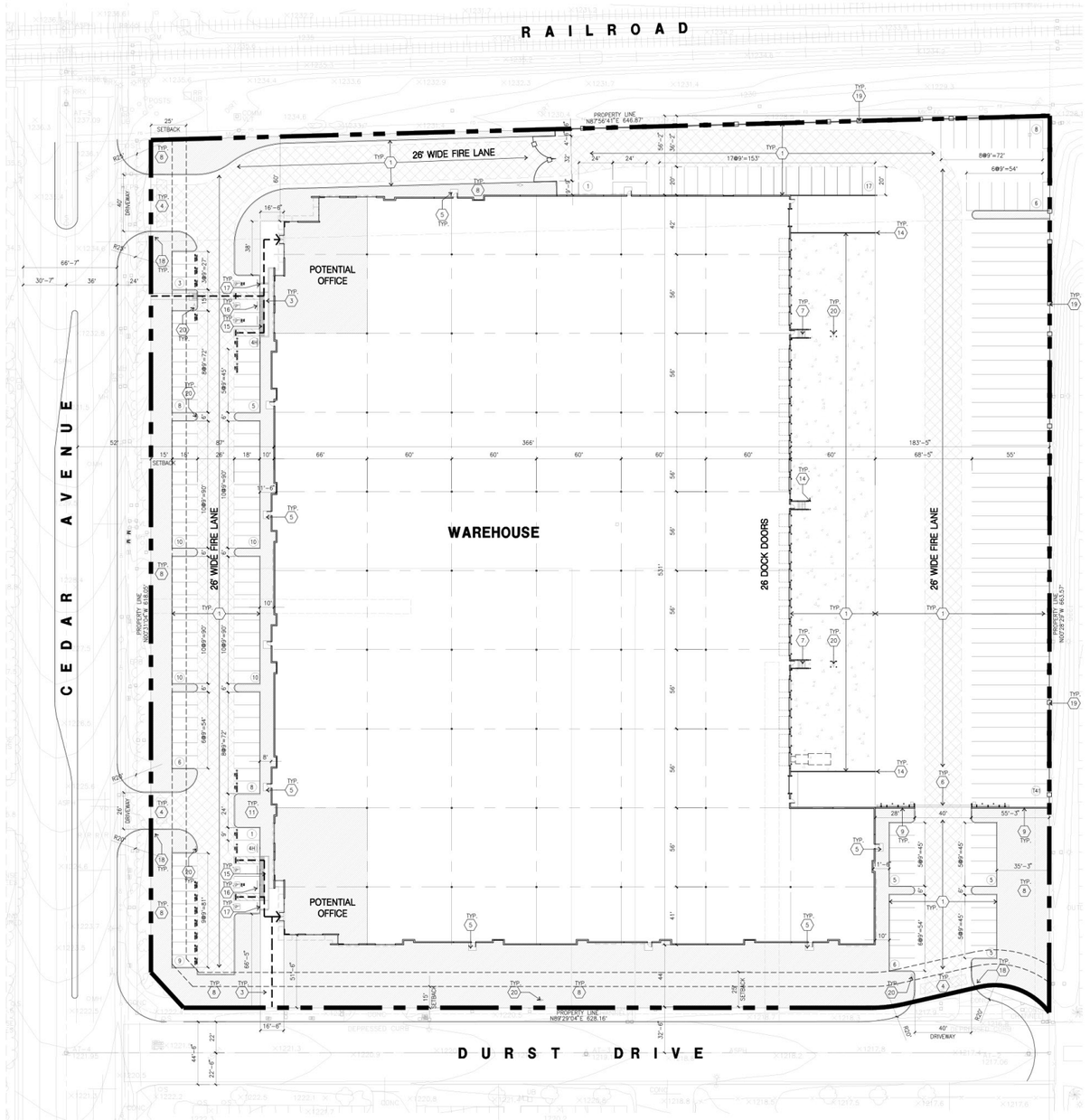
The proposed building is designed such that business operations would be conducted within the enclosed building, with the exception of traffic movement, parking, and the loading and unloading of tractor-trailers at designated loading bays. The Project's building is designed to have 26 loading bays on the east side of the building. As a practical matter, dock doors on warehouse buildings are not occupied by a truck at all times of the day. There are typically many more dock positions on warehouse buildings than are needed for receiving and shipping volumes. The dock doors that are in use at any given time are usually selected based on interior building operation efficiencies. In other words, trucks ideally dock in the position closest to where the goods carried by the truck are stored inside the warehouse. As a result, many dock positions are frequently inactive throughout the day. The outdoor cargo handling equipment used during loading, and unloading of trailers (e.g., yard trucks, hostlers, yard goats, pallet jacks, forklifts) is expected to be non- diesel powered. No outdoor materials storage is proposed for the Project Site. The Project is assumed to be operational 24 hours per day, seven days per week, with parking areas and exterior loading areas illuminated at night in compliance with City standards.

3.5 Summary of Requested Actions

The City of Rialto has primary approval responsibility for the proposed Project. As such, the City is the Lead Agency for this MND pursuant to CEQA Guidelines Section 15050. The City will consider the information contained in this MND and this MND's Administrative Record in its decision-making processes. In the event of approval of the Project and this MND, the City would conduct administrative reviews and issue ministerial permits to implement the Project. A list of the primary actions under City jurisdiction and the jurisdiction of other agencies is provided in Table 3-1, *Summary of Project Approvals/Permits*. This MND covers all federal, state, local government and quasi-government approvals which may be needed to construct or implement the Project, whether or not they are explicitly listed in Table 3-2, or elsewhere in this MND (CEQA Guidelines Section 15124(d)).

Table 3-2 Summary of Project Approvals/Permits

Public Agency	Approvals and Decision
City of Rialto Discretionary Approvals	
City of Rialto Planning Commission	• Approve, conditionally approve, or deny Conditional Development Permit (CDP 2021-0032) and Precise Plan of Design (PPD 2021-0036). • Approve or reject this MND along with appropriate CEQA Findings.
Subsequent City of Rialto Discretionary and Ministerial Approvals	
City of Rialto Implementing Approvals	• Approve Final Maps, lot line adjustments, or parcel mergers, as may be appropriate. • Approve precise site plan(s) and landscaping/irrigation plan (s), as may be appropriate. • Issue Grading Permits. • Issue Building Permits. • Approve Road Improvement Plans. • Approved Water and Sewer Infrastructure Plans. • Issue Encroachment Permits. • Accept public right-of-way dedications. • Approve Stormwater Pollution Prevention Plan (SWPPP) and Water Quality Management Plan (WQMP).
Other Agencies – Subsequent Approvals and Permits	
Santa Ana Regional Water Quality Control Board	• Issuance of a Construction Activity General Construction Permit. • Issuance of a National Pollutant Discharge Elimination System (NPDES) Permit. • Approval of WQMP
Southern California Edison	• Approvals required to remove power poles, underground power lines, and relocate other facilities.



PROJECT INFORMATION

Owner/Applicant
BLACK CREEK GROUP INC.
4675 MacArthur Court, Suite 265
NEWPORT BEACH, CA 92660
TEL: 949-852-4900
CONTACT: CHRIS SANFORD

Project Address
CHERRY AVE. & SANTA ANA AVE.
FONTANA, CA 92337

Applicant's Representative
HPA, INC.
18831 BARDEEN AVE. – SUITE 100
IRVINE, CA 92812
PHONE: (949) 862-2173
CONTACT: MATTHEW LEE

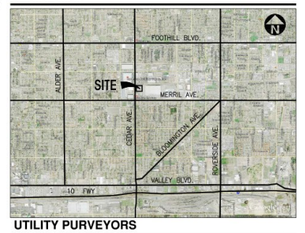
Code Analysis
2016 CALIFORNIA BUILDING CODE
2016 CALIFORNIA PLUMBING CODE
2016 CALIFORNIA MECHANICAL CODE
2016 CALIFORNIA ELECTRICAL CODE
2016 CALIFORNIA FIRE CODE
2016 CALIFORNIA ENERGY CODE
2016 CALIFORNIA GREEN BUILDING STANDARDS

Construction Type
CONCRETE TILT-UP BUILDING
BUILDING OCCUPANCY: S-1/B OFFICE & WAREHOUSE
CONSTRUCTION TYPE: 2B
FIRE SPRINKLER: ESFR SYSTEM

Assessors Parcel Number
0236-122-11 & 12

Zoning
ZONING DESIGNATION- SOUTHWEST INDUSTRIAL PARK/ SLOVER CENTRAL MANUFACTURING / INDUSTRICAL DISTRICT (SCI)

AERIAL MAP



UTILITY PURVEYORS

SOUTHERN CALIFORNIA EDISON
(800) 611-1911

AT&T
16071 MOHAVE DR BLDG A
VICTORVILLE, CA 92395
(510) 645-2929

CITY OF RIALTO, WATER
437 N. RIVERSIDE AVE
RIALTO, CA 92376
(909) 301-9837

CITY OF RIALTO, SEWER
437 N. RIVERSIDE AVE
RIALTO, CA 92376
(909) 301-9837

COUNTY OF SAN BERNARDINO, STORM DRAIN
825 E. THIRD ST.
SAN BERNARDINO, CA 92415
(909) 387-8063

SOUTHERN CALIFORNIA GAS COMPANY
(800) 423-1391

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED FONTANA, IN COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:

THAT PART OF LOT NINE HUNDRED FIFTY-THREE (953) ACCORDING TO MAP SHOWING SUBDIVISION OF LANDS BELONGING TO THE SEMI-TROPIC LAND AND WATER COMPANY RECORDED IN BOOK 11 OF MAPS, PAGE 12 RECORDS OF SAN BERNARDINO COUNTY, IN THE CITY OF FONTANA, STATE OF CALIFORNIA.

BEGINNING 664.72 FEET WEST OF THE CENTER OF THE INTERSECTION OF SANTA ANA AND REDWOOD AVENUE; THENCE NORTH PARALLEL TO THE EAST LIEN OF SAID LOT 953 TO THE NORTH LINE OF SAID LOT 953; THENCE WEST TO THE EAST LINE OF THE WEST ONE-HALF (½) OF THE WEST ONE-HALF (½) OF SAID LOT 953; THENCE SOUTH TO THE CENTER LINE OF SAID SANTA ANA AVENUE; THENCE EAST TOT THE PLACE OF BEGINNING.

AREA AND DISTANCES OF SAID PROPERTY EXTEND TO STREET CENTERS.

PARCEL 2:

THE WEST ONE-HALF (W ½) OF THE WEST ONE-HALF (½) OF LOT 953 ACCORDING TO MAP SHOWING SUBDIVISION OF LANDS BELONGING TO THE SEMI-TROPIC LAND AND WATER COMPANY, RECORDED IN BOOK 11 OF MAPS, PAGE 12, RECORDS OF SAN BERNARDINO COUNTY, IN THE CITY OF FONTANA, STATE OF CALIFORNIA.

AREA AND DISTANCES OF SAID PROPERTY EXTEND TO STREET CENTERS.

SAID SUBDIVISION OF LAND IS PURSUANT TO CERTIFICATE OF COMPLIANCE RECORDED FEBRUARY 12, 1991 AS INSTRUMENT NO. 91-050928 OF OFFICIAL RECORDS, IN THE OFFICE OF THE COUNTY RECORDED OF SAID COUNTY.

APN: 0236-122-11 & 12

SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT.
2. PROPOSED RETAINING WALL. SEE CIVIL DRAWING.
3. CONCRETE WALKWAY
4. DECORATIVE DRIVEWAY APRONS TO BE CONSTRUCTED PER "L" DRAWINGS.
5. 5'-0"X5'-0"X4" MIN. THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" - 1/2" MAX. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY W/ 1/20 MAX. AS REQ. BY CITY INSPECTOR.
6. 8' H. PROVIDE METAL, MANUAL OPERATED GATES W/ KNOX-PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
7. EXTERIOR CONC. STAIR.
8. LANDSCAPE. SEE "L" DWGS.
9. 12'H CONCRETE TILT-UP SCREEN WALL.
10. 2X2 EV CONDUIT CONCRETE PAD.
11. APPROXIMATE LOCATION OF TRANSFORMER.
12. BIKE RACK.
13. TRASH ENCLOSURE
14. CONCRETE FILLED GUARD POST "6 DIA. U.N.O. 42" H.
15. TRUNCATED DOME.
16. PRE-CAST CONCRETE WHEEL STOP.
17. ACCESSIBLE PARKING STALL SIGN.
18. ACCESSIBLE ENTRY SIGN.
19. 8'H WROUGHT IRON FENCE.

SITE LEGEND

- LANDSCAPED AREA
- STANDARD PARKING STALL (9' X 20')
- CONCRETE PAVING SEE "C" DRWGS. FOR THICKNESS
- HANDICAP PARKING STALL (9' X 20') VANPOOL (12' X 20')
- 26' FIRE WIDE FIRELANE
- PATH OF TRAVEL
- CLEAN AIR/VAN POOL/EV CONDUIT WITH FUTURE CHARGING INFRASTRUCTURE STALL (9' X 20')
- CLEAN AIR/VAN POOL/EV STALL (9' X 20')

SITE PLAN GENERAL NOTES

1. THE SITE PLAN BASED ON THE SOILS REPORT PREPARED BY: TBD
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR CRID LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". FINISH TO BE A MEDIUM BROOM FINISH U.N.O.
11. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
12. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
13. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
14. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
15. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB.

TABULATION

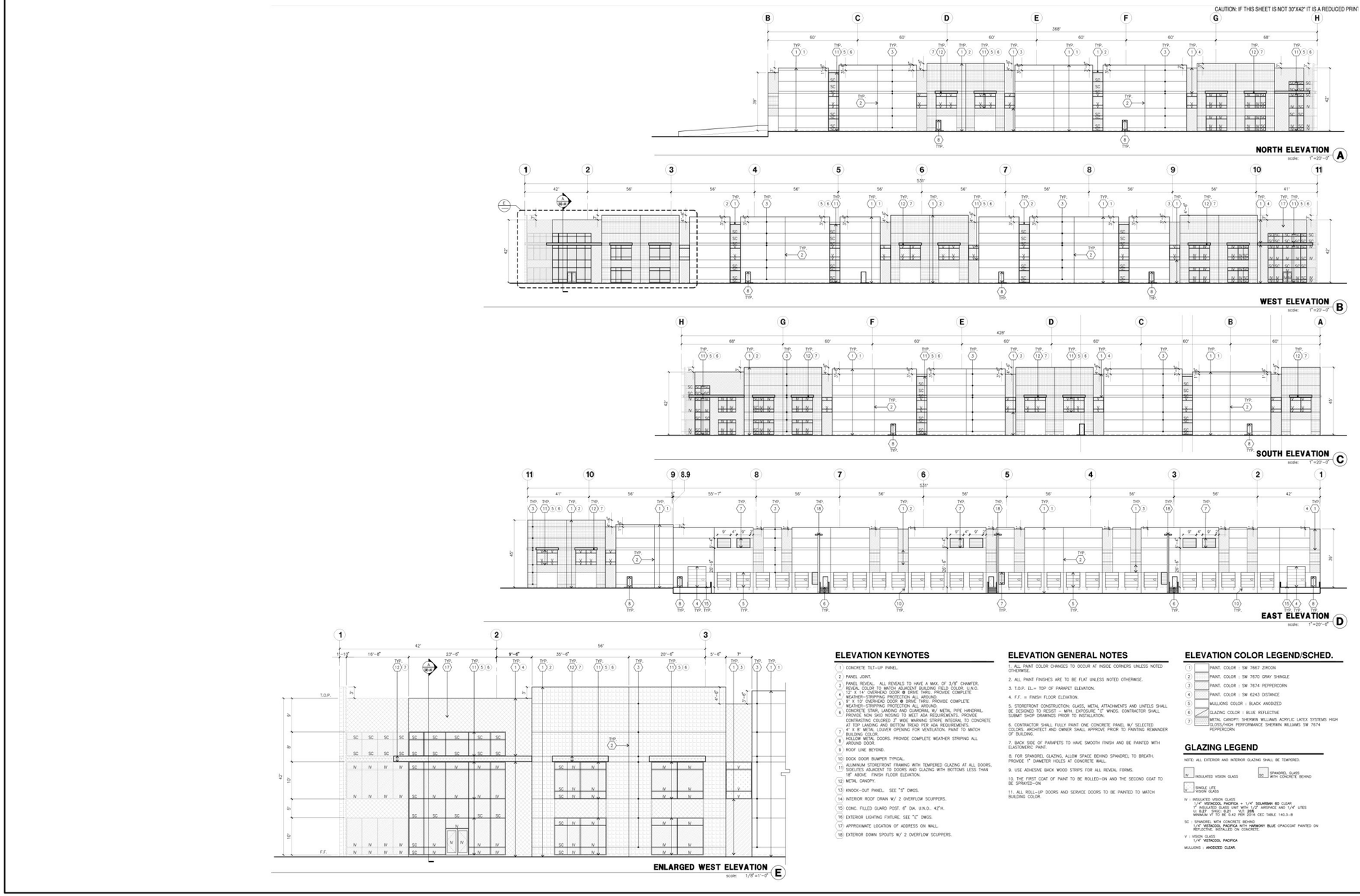
SITE AREA	
In s.f.	396,227 s.f.
In acres	9.10 ac
BUILDING AREA	
Office 1st Floor	5,000 s.f.
Office 2ndFloor	5,000 s.f.
Warehouse	191,239 s.f.
TOTAL	201,239 s.f.
COVERAGE	50.8%
AUTO PARKING REQUIRED	
Office: 1/250 s.f.	40 stalls
Whse:1st 10,000 @ 1/1,000 s.f.	10 stalls
Above 10,000 @ 1/2,000 s.f.	91 stalls
TOTAL	141 stalls
AUTO PARKING PROVIDED	
Standard (9' x 20')	97 stalls
Standard accessible parking (9' x 20'	3 stalls
Van accessible parking (12' x 20')	3 stalls
Clean Air/ Van Pool (9' x 20')	11 stalls
EV Accessible parking (9' x 20')	1 stalls
EV accessible Van parking (12' x 20'	1 stalls
EV Parking (9' x 20')	5 stalls
Alternate (9' x 20')	20 stalls
TOTAL	141 stalls
TRAILER PARKING PROVIDED	
Trailer (10' x 55')	48 stalls
ZONING ORDINANCE FOR CITY	
Zoning Designation - General Manufacturing (M-2)	
MAXIMUM BUILDING HEIGHT ALLOWED	
Height - 75'	
MAXIMUM FLOOR AREA RATIO	
FAR - to be verified	
SETBACKS	
Front - 15'	
Side/Rear - None	

Source(s): HPA (10-18-2021)

Figure 3-1

Not to Scale

Conceptual Site Plan



ELEVATION KEYNOTES

1. CONCRETE TILT-UP PANEL.
2. PANEL JOINT.
3. PANEL REVEAL. ALL REVEALS TO HAVE A MAX. OF 3/8" CHAMFER. REVEAL COLOR TO MATCH ADJACENT BUILDING FIELD COLOR, U.N.O.
4. 12' X 14' OVERHEAD DOOR ⊕ DRIVE THRU. PROVIDE COMPLETE WEATHER-STRIPPING PROTECTION ALL AROUND.
5. 9' X 10' OVERHEAD DOOR ⊕ DRIVE THRU. PROVIDE COMPLETE WEATHER-STRIPPING PROTECTION ALL AROUND.
6. CONCRETE STAIR, LANDING AND GUARDRAIL W/ METAL PIPE HANDRAIL. PROVIDE NON SKID NOSING TO MEET ADA REQUIREMENTS. PROVIDE CONTRASTING COLORED 3" WIDE WARNING STRIPE INTEGRAL TO CONCRETE AT TOP LANDING AND BOTTOM TREAD PER ADA REQUIREMENTS.
7. 4' X 8' METAL LOUVER OPENING FOR VENTILATION. PAINT TO MATCH BUILDING COLOR.
8. HOLLOW METAL DOORS. PROVIDE COMPLETE WEATHER STRIPING ALL AROUND DOOR.
9. ROOF LINE BEYOND.
10. DOCK DOOR BUMPER TYPICAL.
11. ALUMINUM STOREFRONT FRAMING WITH TEMPERED GLAZING AT ALL DOORS, SIDELITES ADJACENT TO DOORS AND GLAZING WITH BOTTOMS LESS THAN 18" ABOVE FINISH FLOOR ELEVATION.
12. METAL CANOPY.
13. KNOCK-OUT PANEL. SEE "S" DWGS.
14. INTERIOR ROOF DRAIN W/ 2 OVERFLOW SCUPPERS.
15. CONC. FILLED GUARD POST. 6" DIA. U.N.O.. 42"H.
16. EXTERIOR LIGHTING FIXTURE. SEE "E" DWGS.
17. APPROXIMATE LOCATION OF ADDRESS ON WALL.
18. EXTERIOR DOWN SPOUTS W/ 2 OVERFLOW SCUPPERS.

ELEVATION GENERAL NOTES

1. ALL PAINT COLOR CHANGES TO OCCUR AT INSIDE CORNERS UNLESS NOTED OTHERWISE.
2. ALL PAINT FINISHES ARE TO BE FLAT UNLESS NOTED OTHERWISE.
3. T.O.P. EL.= TOP OF PARAPET ELEVATION.
4. F.F. = FINISH FLOOR ELEVATION.
5. STOREFRONT CONSTRUCTION: GLASS, METAL ATTACHMENTS AND LINTELS SHALL BE DESIGNED TO RESIST +- MPH. EXPOSURE "C" WINDS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO INSTALLATION.
6. CONTRACTOR SHALL FULLY PAINT ONE CONCRETE PANEL W/ SELECTED COLORS. ARCHITECT AND OWNER SHALL APPROVE PRIOR TO PAINTING REMAINDER OF BUILDING.
7. BACK SIDE OF PARAPETS TO HAVE SMOOTH FINISH AND BE PAINTED WITH ELASTOMERIC PAINT.
8. FOR SPANDREL GLAZING, ALLOW SPACE BEHIND SPANDREL TO BREATH. PROVIDE 1" DIAMETER HOLES AT CONCRETE WALL.
9. USE ADHESIVE BACK WOOD STRIPS FOR ALL REVEAL FORMS.
10. THE FIRST COAT OF PAINT TO BE ROLLED-ON AND THE SECOND COAT TO BE SPRAYED-ON
11. ALL ROLL-UP DOORS AND SERVICE DOORS TO BE PAINTED TO MATCH BUILDING COLOR.

ELEVATION COLOR LEGEND/SCHED.

1	PAINT. COLOR : SW 7667 ZIRCON
2	PAINT. COLOR : SW 7670 GRAY SHINGLE
3	PAINT. COLOR : SW 7674 PEPPERCORN
4	PAINT. COLOR : SW 6243 DISTANCE
5	MULLIONS COLOR : BLACK ANODIZED
6	GLAZING COLOR : BLUE REFLECTIVE
7	METAL CANOPY: SHERWIN WILLIAMS ACRYLIC LATEX SYSTEMS HIGH GLOSS/HIGH PERFORMANCE SHERWIN WILLIAMS SW 7674 PEPPERCORN

GLAZING LEGEND

NOTE: ALL EXTERIOR AND INTERIOR GLAZING SHALL BE TEMPERED.

IV — INSULATED VISION GLASS
SC — SPANDREL GLASS WITH CONCRETE BEHIND
V — SINGLE LITE VISION GLASS

IV : INSULATED VISION GLASS
1/4" **VISTACOOL PACIFICA** + 1/4" **SOLARBAN 80** CLEAR
1" INSULATED GLASS UNIT WITH 1/2" AIRSPACE AND 1/4" LITES
U: 0.27 SHGC: **0.21** VLT: **39%**
MINIMUM VT TO BE 0.42 PER 2016 CEC TABLE 140.3-B

SC : SPANDREL WITH CONCRETE BEHIND
1/4" **VISTACOOL PACIFICA** WITH **HARMONY BLUE** OPACICOAT PAINTED ON REFLECTIVE INSTALLED ON CONCRETE.

V : VISION GLASS
1/4" **VISTACOOL PACIFICA**

MULLIONS : **ANODIZED CLEAR.**

Source(s): HPA (10-18-2021)

Figure 3-2

Not to Scale

Conceptual Architectural Elevations



PLANTING LEGEND

TREES

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	REMARKS
	Chilopsis linearis Desert Willow	24" Box	8	L	Multi
	Chitalpa tashkentensis Chitalpa	24" Box	9	L	Standard
	Cinnamomum camphora Camphor Tree	24" Box	25	M	Standard
	Koelreuteria bipinnata Chinese Flame Tree	36" Box	9	M	Multi
	Lagerstroemia i 'Muskogee' Crape Myrtle	48" Box 24" Box	12 13	M M	
	Tristania conferta Brisbane Box	15 Gal	11	M	Standard

SHRUBS

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	REMARKS
	Dietes bicolor Fortnight Lily	5 Gal	0	M	
	Muhlenbergia rigens Deer Grass	5 Gal	0	M	
	Salvia greggii Autumn Sage	5 Gal	0	L	
	Salvia leucantha Mexican Sage	5 Gal	0	L	
	Westringia fruticosa Coast Rosemary	5 Gal	0	L	

ACCENTS

SYMBOL	BOTANICAL/COMMON NAME	SIZE	SPACING	WUCOLS	REMARKS
	Agave victoria-reginae Agave	5 Gal	0	L	
	Hesperaloe parviflora Red Yucca	5 Gal	0	L	

GROUNDCOVER

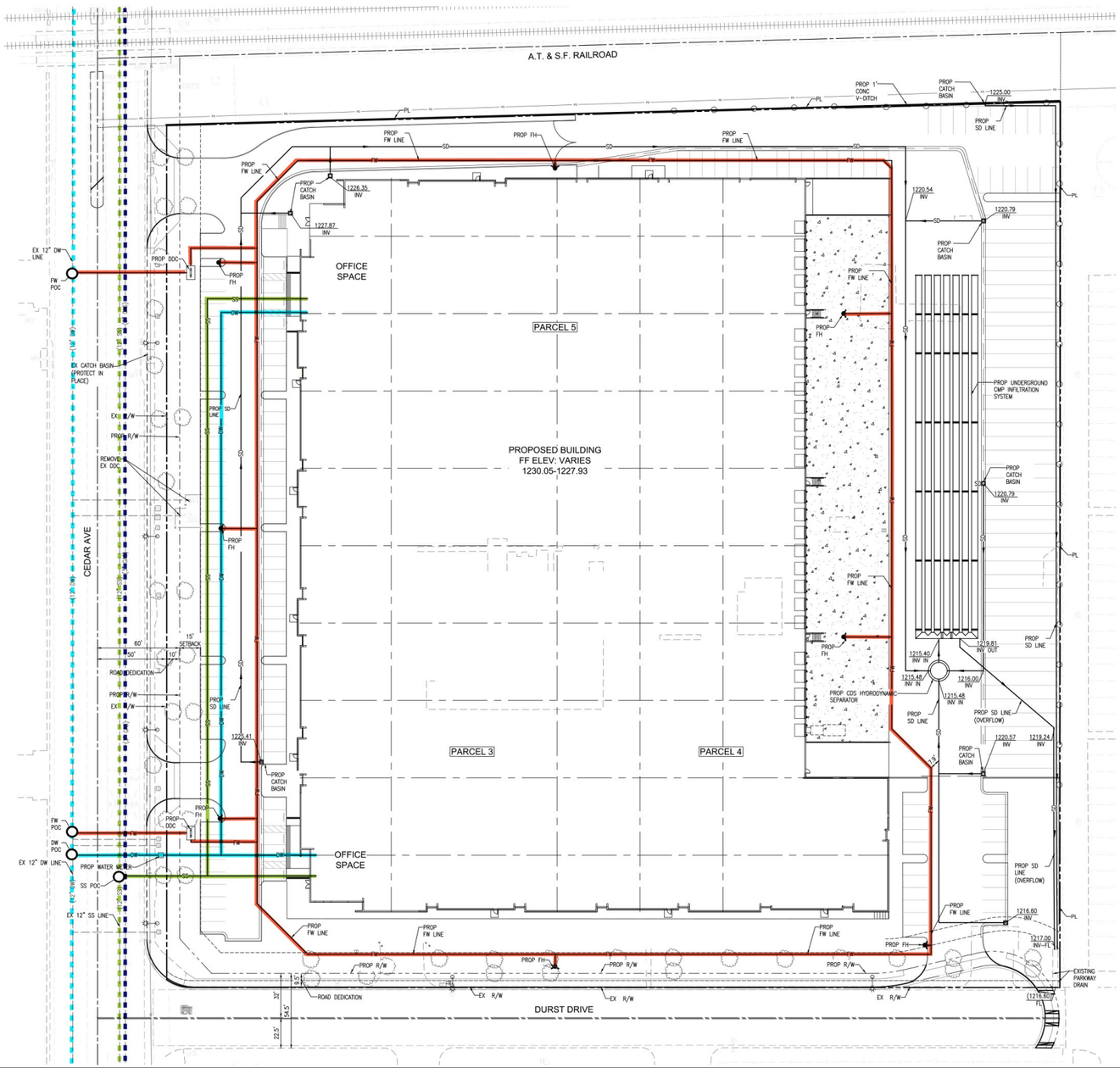
SYMBOL	BOTANICAL/COMMON NAME	SIZE	SPACING	WUCOLS	REMARKS
	Hemerocallis hybridus-Yellow Yellow Day Lily	1 Gal	24" O.C.	M	
	Lantana 'New Gold' Yellow Lantana	1 Gal	48" O.C.	L	
	Rosmarinus o. 'Huntington Carpet' Prostrate Rosemary	1 Gal	48" O.C.	L	

Source(s): Hunter Landscaping (10-18-2021)

Figure 3-3

Not to Scale

Conceptual Landscaping Plan



Legend

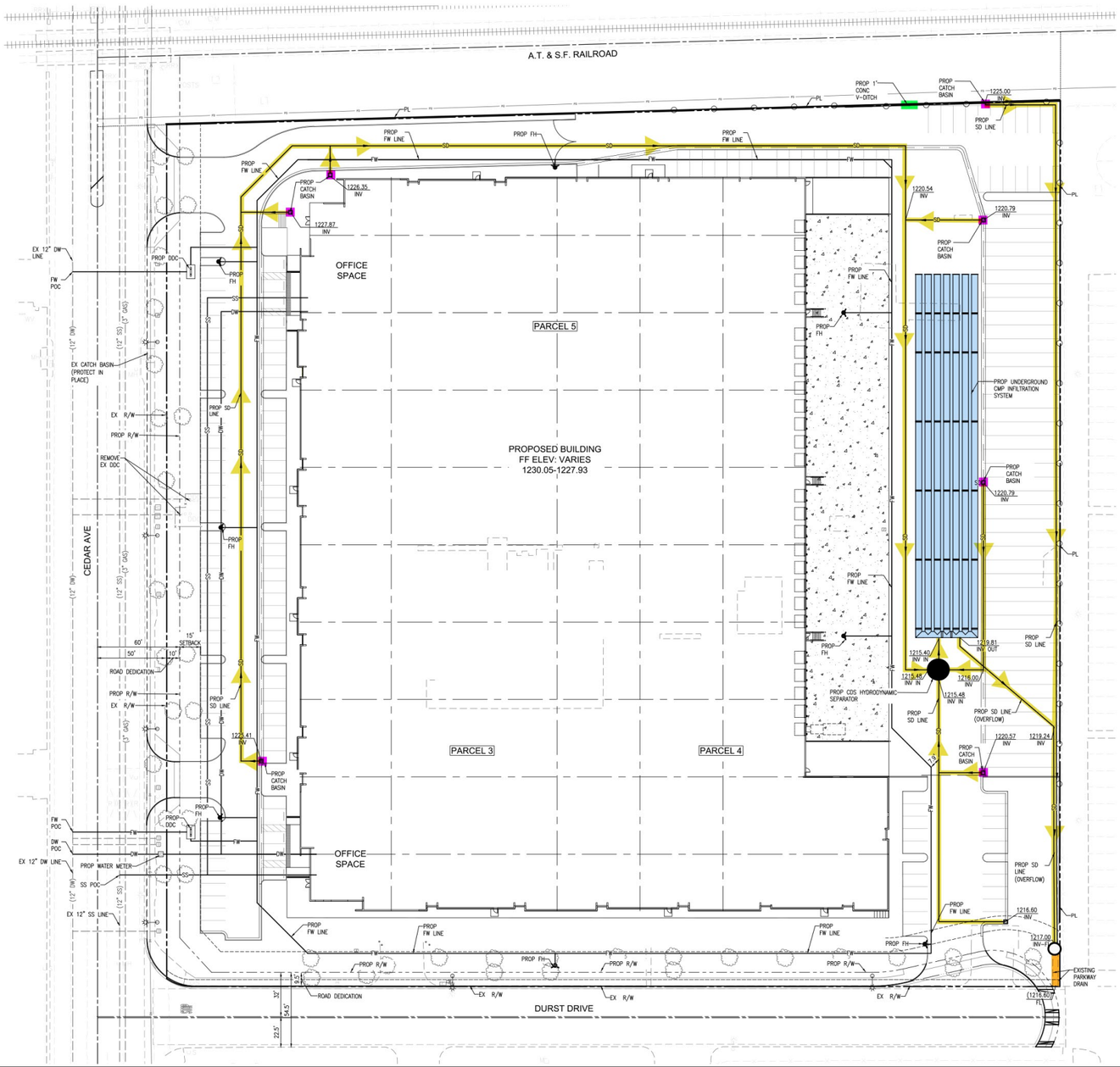
- Existing Domestic Water Line
- Proposed Domestic Water Line
- Proposed Fire Water Line
- Existing Gas Line
- Existing Sewer Line
- Proposed Sewer Line
- Point of Connection

Source(s): WestLAND Group, Inc. (10-18-2021)

Figure 3-4

Not to Scale

Conceptual Utility Plan



Legend

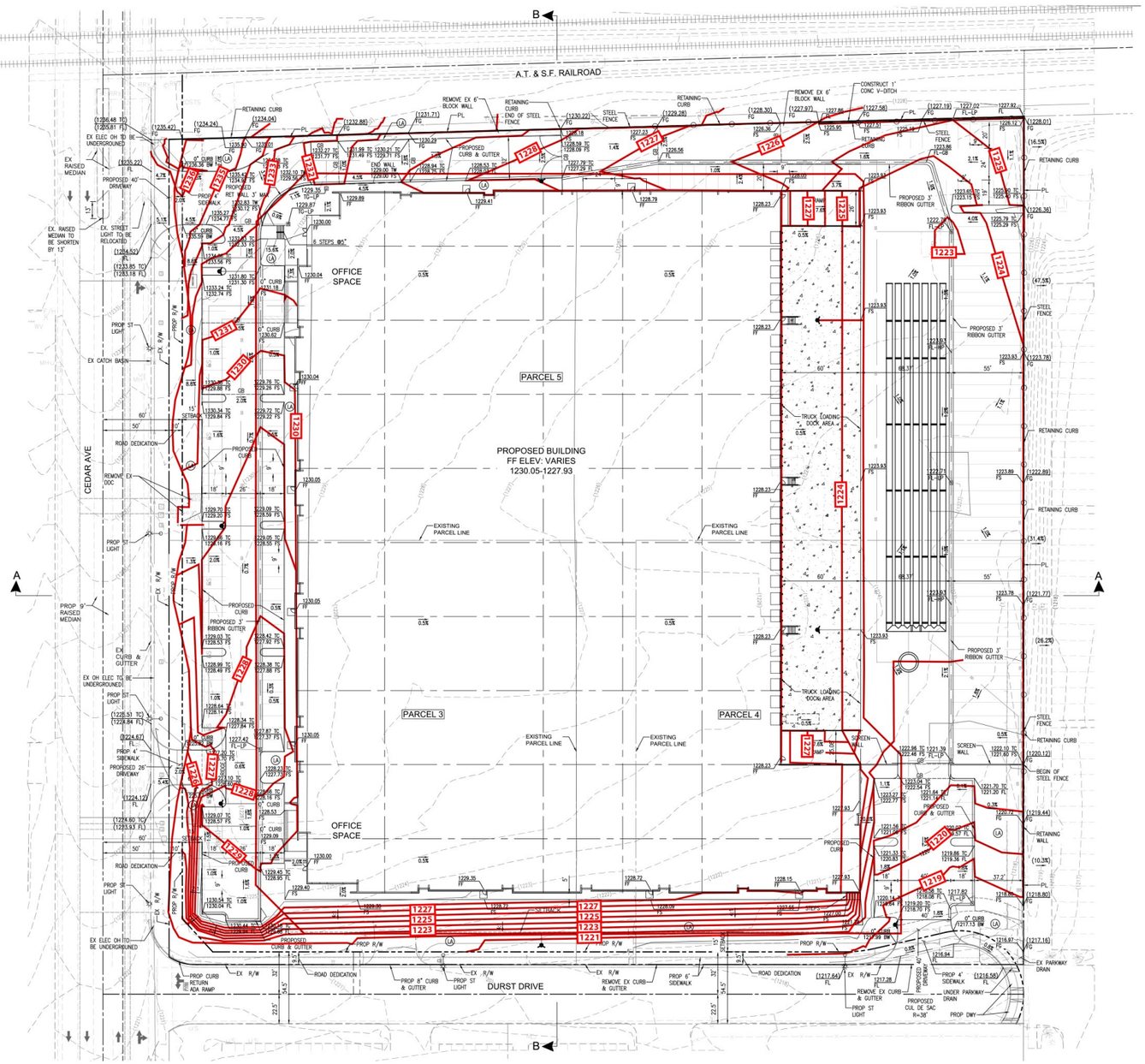
- Proposed Storm Drain Line
- Proposed Subsurface Infiltration Chamber
- Proposed Catch Basin
- Proposed Concrete Drainage Ditch
- Existing Parkway Drain
- Direction of Water Flow
- Point of Connection
- Proposed Hydro-Dynamic Seperator

Source(s): WestLAND Group, Inc. (10-18-2021)

Figure 3-5

Not to Scale

Conceptual Storm Drain Plan



Source(s): WestLAND Group, Inc. (10-18-2021)

Figure 3-6

Not to Scale

Conceptual Grading Plan

4.0 ENVIRONMENTAL CHECKLIST ("INITIAL STUDY")

1. Project Title

Durst Drive Warehouse

2. Lead Agency Name and Address

City of Rialto
Community Development Department
150 South Palm Avenue
Rialto, CA 92376

3. Contact Person and Phone Number

Daniel Casey
Senior Planner, City of Rialto
(909) 820-2535

4. Project Location

The 9.1-acre Project Site is located at 1230 West Durst Drive, Rialto, California, at the northeast corner of Cedar Avenue and Durst Drive.

5. Project Applicant

AIREF Rialto Commerce Center LP
4675 MacArthur Court, Suite 625
Newport Beach, CA 92660

6. General Plan Designation

Light Industrial (LI)

7. Zoning

General Manufacturing (M-2)

8. Description of Project

The Project involves redevelopment of the Project Site with a 201,239-sf warehouse building having 191,239 sf of warehouse storage space and 10,000 sf of supporting office space along with associated Site improvements including, but not limited to, surface parking lots, drive aisles, utility infrastructure, landscaping, exterior lighting, and walls/fencing. The Project would require the demolition of all existing improvements and landscaping on the Project Site.

9. Surrounding Land Uses and Setting

The Project Site is located in a highly developed, urban area. Surrounding land uses include:

North: Properties to the immediate north are designated as Light Industrial (LI) and zoned as General Manufacturing (M-2). Existing uses to the north (north of the BNSF railroad tracks) include various

industrial facilities, including several warehouse facilities and an engineered metal pipe manufacturing facility. Rialto Middle School and Charlotte N. Werner Elementary School are located north of Rialto Avenue and single-family residences are located farther north.

South: Properties to the immediate south are designated as Light Industrial (LI) and zoned as General Manufacturing (M-2). Existing uses to the south include an industrial facility (steel and metals distribution) and vacant, undeveloped lots. Abutting Merrill Avenue are food service (fast food and food manufacturing) and industrial (auto services) land uses. Residential land uses are located south of Merrill Avenue.

West: Properties to the immediate west are designated as Light Industrial (LI) and zoned as General Manufacturing (M-2). Existing uses to the west include warehousing facilities extending to Linden Avenue, followed by single family residences located farther west.

East: Properties to the immediate east are designated as Light Industrial (LI) and zoned as General Manufacturing (M-2). Existing uses to the east include industrial facilities (warehousing, storage, and manufacturing) extending to Lilac Avenue. Curtis Elementary School and residential land uses are located farther east.

10. Other Public Agencies Whose Approval Is Required (e.g., permits, financing approval, or participation agreement)

Southern California Edison and Santa Ana Regional Water Quality Control Board (RWQCB) (refer to Table 3-2 of this MND).

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

The City of Rialto is required to consult with interested California Native American tribes regarding the Project pursuant to Assembly Bill 52 (AB 52). The City contacted California Native American Tribes with traditional use areas that encompass or are in the vicinity of the Project Site. The Project received requests for consultation from Gabrieleño Band Of Mission Indians – Kizh Nation. The City concluded consultation on May 12, 2022.

Environmental Factors Potentially Affected

The environmental factors checked below (☒) would be potentially affected by the Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Greenhouse Gas Emissions	☐ Public Services
☐ Agriculture and Forestry Resources	☐ Hazards & Hazardous Materials	☐ Recreation
☐ Air Quality	☐ Hydrology/Water Quality	☐ Transportation
☐ Biological Resources	☐ Land Use/Planning	☐ Tribal Cultural Resources
☐ Cultural Resources	☐ Mineral Resources	☐ Utilities/Service Systems
☐ Energy	☐ Noise	☐ Wildfire
☐ Geology/Soils	☐ Population/Housing	☐ Mandatory Findings of Significance

Determination

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	☐
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	☒
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	☐
I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	☐
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	☐

Submitted by: Daniel Casey, Senior Planner, City of Rialto — Date: 7-6-2022

Evaluation of Environmental Impacts:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a Lead Agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the Lead Agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The Lead Agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a. Earlier Analyses Used. Identify and state where they are available for review.

   b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

6) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

7) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

8) Supporting Information Sources. A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

9) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

10) The explanation of each issue should identify:

   a. the significance criteria or threshold, if any, used to evaluate each question; and

   b. the mitigation measure identified, if any, to reduce the impact to less than significance.

4.1 Aesthetics

Environmental Issue Areas Examined		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the Project:					
a)	*Have a substantial adverse effect on a scenic vista?*	☐	☐	☑	☐
b)	*Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*	☐	☐	☐	☑
c)	*In non-urbanized areas, substantially degrade the existing visual character or quality of public views the site and its surroundings (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*	☐	☐	☐	☑
d)	*Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*	☐	☐	☑	☐

a) Would the Project have a substantial adverse effect on a scenic vista?

Less than Significant Impact. Under existing conditions, the Project Site does not serve as a scenic vista or contribute to a scenic vista. Large expanses of the Project Site's Cedar Avenue and Durst Drive frontages are blocked by solid screen walls and mature trees (refer to Figures 2-8 through 2-10). Furthermore, the City of Rialto General Plan does not identify any scenic vistas or scenic corridors on the Project Site or in the vicinity of the Project Site (City of Rialto, 2010, pp. 2-22, 2-53).

The City of Rialto General Plan identifies the San Gabriel and San Bernardino Mountains as scenic resources with prominent visibility from viewpoints within the City. The Project Site is located approximately 20 miles southeast of the San Gabriel Mountains and 32 miles west of the San Bernardino Mountains, respectively. Under existing conditions, views of the San Gabriel Mountains and the San Bernardino Mountains are obscured from public viewpoints adjacent to the Project Site by the on-Site solid screen walls and mature trees abutting Cedar Avenue and Durst Drive, as well as from off-Site development and landscaping, and atmospheric haze that is common in the Inland Empire throughout the year.

The Project would not substantially alter existing views of the San Gabriel or San Bernardino Mountains from public viewing areas adjacent to the Project Site. As stated above, views of these resources are mostly obscured from the Project Site by existing development and landscaping on the Project Site and off-Site development (and, for parts of the year, atmospheric haze). The building and Site improvements proposed by the Project would continue to obscure views of the San Gabriel and San Bernardino Mountains from public viewing areas adjacent to the Project Site but not substantially more than occurs under existing conditions

Based on the foregoing analysis, the Project would not have a substantial adverse effect on a scenic vista or scenic resources in the Project vicinity. Impacts would be less than significant.

b) Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

No Impact. The Project Site is not located within or adjacent to an officially designated State scenic highway corridor and does not contain scenic resources, such as trees of scenic value, rock outcroppings, or historic buildings (Caltrans, 2022). There is no potential for the proposed Project to adversely impact the viewshed within a scenic highway corridor. No impact would occur.

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

No Impact. The United States Census Bureau defines "urbanized area" as a densely settled core of census tracts and/or census blocks that have 50,000 or more residents, and meet minimum population density requirements while also being adjacent to territory containing non-residential urban land uses. The Project Site is located within the boundaries of the Census-defined Riverside-San Bernardino urban area (USCB, 2012); therefore, the Project would be considered to result in a significant adverse impact under this threshold only if the Project design would conflict with applicable zoning and other regulations governing scenic quality.

The Project's design, including site layout, architecture, and landscaping is discussed and illustrated in detail in Section 3.0, *Project Description*. As previously described, the Project's architecture incorporates a neutral color palette that would not be visually offensive and also incorporates accent elements, such as colored glass and decorative building elements at the building's office entries for visual interest. Additionally, the Project's landscape plan incorporates low-water-need plant species that can maintain vibrancy during drought conditions. As a condition of approval, the Project Applicant would be required to maintain the proposed building, landscaping and improvements in a state of good repair. The proposed visual features of the Project would ensure a high-quality aesthetic for the site. As part of their standard discretionary permit review process, the City of Rialto reviewed the Project proposal in detail and determined that no component of the Project would conflict with applicable design regulations within the City of Rialto's Zoning and Development Code governing scenic quality. No impact would occur.

d) Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views?

Less than Significant Impact. Under the existing conditions, the Project Site contains sources minimal sources of artificial lighting but artificial lighting (i.e., street lights) are present along the Project Site's frontages on Cedar Avenue and Durst Drive.

The Project would introduce new light sources to the Project Site as necessary for security, safety, and wayfinding. The Project's lighting elements would include building-mounted fixtures (security lighting and upward/downward facing decorative lighting oriented toward the building) and pole-mounted fixtures in the Project's truck docking areas and at the Project's driveway entries along Cedar Avenue and Durst

Drive. The Project would be required to adhere to the lighting requirements as set forth in the Rialto Municipal Code (Section 18.61.140). The Rialto Municipal Code lighting standards govern the placement and design of outdoor lighting fixtures to ensure adequate lighting for public safety while also minimizing light pollution and glare and precluding public nuisances. Mandatory compliance with Rialto Municipal Code Section 18.61.140 would ensure that the Project's building and associated site features would not introduce any permanent design features that would adversely affect day or nighttime views in the area.

Glare is caused by light reflections from pavement, vehicles, and building materials such as reflective glass and polished surfaces. During daylight hours, the amount of glare depends on intensity and direction of sunlight. Proposed exterior building materials primarily include concrete, painted metal, and tempered glass. While window glazing has a potential to result in minor glare effects, such effects would not adversely affect daytime views of surrounding properties, including motorists along adjacent roadways, because the glass proposed for the Project would be low-reflective and set back from the roadway at a distance and proposed landscaping would provide a buffer between all proposed glass surfaces and the public right of way.

For the reasons given above, implementation of the Project would not result in a significant source of light or glare that would adversely affect daytime or nighttime views. Accordingly, impacts would be less than significant.

4.2 Agriculture and Forestry Resources

Environmental Issue Areas Examined		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
a)	*Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*	☐	☐	☐	☑
b)	*Conflict with existing zoning for agricultural use, or a Williamson Act contract?*	☐	☐	☐	☑
c)	*Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*	☐	☐	☐	☑
d)	*Result in the loss of forest land or conversion of forest land to non-forest use?*	☐	☐	☐	☑
e)	*Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*	☐	☐	☐	☑

a) Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use

No Impact. According to mapping information available from the California Department of Conservation (CDC) Farmland Mapping and Monitoring Program (FMMP), the Project Site does not contain any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (CDC, 2018). The nearest area of any mapped Farmland is a relatively small area of Farmland of Statewide Importance and Prime Farmland located approximately 3.40 miles to the south of the Project Site. Given that the Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on maps prepared pursuant to the FMMP, to a non-agricultural use, no impact would occur.

b) Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Project Site is zoned for General Manufacturing (M-2) and the Site is completely developed/disturbed under existing conditions and not used for agriculture. The Project Site is not located within any agricultural preserves, nor is the Project Site subject to any Williamson Act Contracts (CDC,

2018). As a result, the Project will not result in conflict with existing agricultural zoning or Williamson Act contracts. The Project would result in no impact.

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

No Impact. Under existing conditions, the Project Site is located within the City of Rialto, has a zoning designation of M-2 (which is not forest land or timberland), and does not contain forest land. The Project does not propose a change of zone, and would utilize the Project Site in a manner that is consistent with its existing M-2 zone designation. Accordingly, no impact to forest land would occur.

d) Would the Project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The Project Site and surrounding areas contain urbanized uses and do not consist of forest land. Therefore, the Project would not result in the loss of forest land or result in the conversion of forest land to non-forest use. Accordingly, no impact would occur.

e) Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. As previously stated, the Project Site is completely developed and the proposed re-development of the property would not result in changes in the environment which, due to their location and nature, could result in conversion of Farmland or forest land to non-agricultural or non-forest use. Accordingly, no impact would occur.

4.3 Air Quality

Environmental Issue Areas Examined		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
a)	***Conflict with or obstruct implementation of the applicable air quality plan?***	☐	☐	☑	☐
b)	***Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?***	☐	☐	☑	☐
c)	***Expose sensitive receptors to substantial pollutant concentrations?***	☐	☐	☑	☐
d)	***Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?***	☐	☐	☑	☐

The analysis in this section is based on the *Durst Drive Warehouse Air Quality Impact Analysis* report (AQ Analysis) prepared by Urban Crossroads, Inc. (Urban Crossroads) dated January 26, 2022, which is provided in its entirety as Appendix A of the IS/MND (Urban Crossroads, 2022a). The analysis in this section is also based on the *Durst Drive Warehouse Mobile Source Health Risk Assessment* (HRA Analysis) dated January 26, 2022, which is provided in its entirety as Appendix B of the IS/MND (Urban Crossroads, 2022b).

a) Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact. The Project Site is located within the South Coast Air Basin (SCAB). Currently, State, and federal air quality standards are exceeded in most parts of the SCAB. It should be noted that emissions of ozone (O_3), nitrogen oxides (NO_X). volatile organic compounds (VOC), and carbon dioxide (CO) have been decreasing in the SCAB since 1975 and are projected to continue to decreasing due to increased regulatory requirements. Additionally, the overall trends of particulate matter (PM_{10} and $PM_{2.5}$) in the air also have improved since 1975. (Urban Crossroads, 2022a, p. 55)

In response to local air quality conditions, the South Coast Air Quality Management District (SCAQMD) has adopted a series of Air Quality Management Plans (AQMPs) to meet the State and federal ambient air quality standards. AQMPs are regularly updated to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. The current AQMP, the 2016 AQMP, was adopted by the SCAQMD in March 2017 and the Project's consistency with the 2016 AQMP is discussed below. Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2, and Section 12.3 of the SCAQMD's CEQA Air Quality Handbook (1993). The Project's consistency with these criteria is discussed below.

> *Consistency Criterion No. 1: The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.*

Consistency Criterion No. 1 refers to violations of the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS). As evaluated under Response 4.3(b), the Project would not contribute air pollutant volumes to the SCAB that would contribute to or exacerbate existing air quality violations. Additionally, as evaluated under Response 4.3(c), the Project would not generate localized criteria pollutant emissions increase the frequency or severity of existing air quality violations, cause or contribute to new violations, and/or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP. Accordingly, the Project is determined to be consistent with Consistency Criterion No. 1.

Consistency Criterion No. 2: The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

The growth forecasts used in the AQMP to calculate future regional emissions levels are based on land use planning data provided by lead agencies via their general plan documentation. Development projects that increase the intensity of use on a specific property beyond the respective general plan's vision may result in increased stationary area source emissions and/or vehicle source emissions when compared to the AQMP assumptions. However, if a project does not exceed the growth projections in the applicable local general plan, then the project is considered to be consistent with the growth assumptions in the AQMP. The Project would be consistent with the City of Rialto's General Plan land use designation for the subject property and, therefore, the Project would be consistent with the growth assumptions used in the AQMP and would not exceed the AQMP's long-term emissions projections.

For the reasons stated above, the Project would not result in a substantial adverse environmental impact due to an increase in the frequency or severity of existing air quality violations, the creation of new violations, the delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP, or the exceedance of growth assumptions in the AQMP. As such, impacts would be less-than-significant.

b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less than Significant Impact. The Project has the potential to generate air pollution during both construction activities and long-term operation. For a detailed description of the health effects of air pollutants refer to Section 2.4 of the Project's AQ Analysis. In general, air pollutants have adverse effects to human health including, but not limited to, respiratory illness and carcinogenic effects; however, based on available modeling it is not feasible to correlate regional criteria pollutant emissions from development projects of the scale of the proposed Project to adverse health effects on a SCAB-wide level (Urban Crossroads, 2022a, pp. 11-17, 57-58). The potential for the Project to result in substantial adverse health effects from toxic air contaminant emissions is addressed in Response 4.3(c).

The following analysis is based on the applicable significance thresholds established by the SCAQMD for regional criteria pollutant emissions (as summarized in Table 3-1 of the Project's AQ Analysis). This analysis assumes that the proposed Project would comply with applicable mandatory regional air quality standards, including: SCAQMD Rule 403, "Fugitive Dust;" SCAQMD Rule 431.2, "Sulfur Content of Liquid

Fuels;" SCAQMD Rule 1113, "Architectural Coatings;" SCAQMD Rule 1186, "PM_{10} Emissions from Paved and Unpaved Roads, and Livestock Operations;" SCAQMD Rule 1186.1, "Less-Polluting Street Sweepers," and Title 13, Chapter 10, Section 2485, Division 3 of the California Code of Regulations "Airborne Toxic Control Measure."

Although it cannot be quantified in the air pollutant calculations presented herein, the Project would be subject to SCAQMD Rule 2305 (Warehouse Indirect Source Rule, ISR). The ISR applies to warehouse operators and owners of warehouses with at least 100,000 square feet of indoor floor space within a single building that can be used for warehousing activities. In general, the ISR establishes the Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program, which is a points system that is based upon the actual number of trucks that come to and leave the warehouse. Each year the operator of the Project will be obligated to determine how many points the warehouse is required to achieve using a formula set out in the ISR. If the required number of points are not achieved, the Project's operator would be required to pay a fee to the SCAQMD, which would use collected funds to improve air quality. Although compliance with Rule 2305 is not mitigation and the SCAQMD has not published a nexus study showing how the use of collected funds has nexus to the warehouse's air quality impacts, the ISR program is intended to reduce air quality effects associated with the warehouse industry, including the proposed Project, throughout the SCAB.

Project Construction Impact Analysis

For purposes of the construction emissions analysis, construction was expected to occur between July 2022 and June 2023. The California Emissions Estimator Model (CalEEMod) accounts for the implementation and enforcement of California's progressively more restrictive regulatory requirements for construction equipment and the ongoing replacement of older construction fleet equipment with newer, less- polluting equipment. According to the CalEEMod, construction activities that occur in the near future are expected to generate more air pollutant emissions than the same activities that may occur farther into the future. Thus, in the event that the Project's construction period occurs later than expected by this analysis, Project-related construction emissions would not exceed the values presented herein. (Urban Crossroads, 2022a, p. 40) The Project's construction characteristics and construction equipment fleet assumptions used in the analysis were previously described in Section 3.0, *Project Description*.

The calculated maximum daily emissions associated with Project construction are presented in Table 4-1, *Construction Emissions Summary*. Detailed construction model outputs are presented in Appendix 3.1 of the Project's AQ Analysis. As shown, the Project's daily construction emissions of volatile organic compounds (VOCs), nitrogen oxides (NO_X) carbon monoxide (CO), sulfur oxides (SO_X), and particulate matter (PM_{10} and $PM_{2.5}$) would not exceed SCAQMD regional criteria thresholds. The SCAQMD considers any project-specific criteria pollutant emissions that exceed applicable SCAQMD significance thresholds also to be cumulatively considerable. To put it another way, if a project does not exceed the SCAQMD regional thresholds, then SCAQMD considers that project's air pollutant emissions to not be cumulatively considerable. Thus, because Project construction would not exceed the SCAQMD regional criteria significance thresholds, implementation of the Project would not result in a cumulatively considerable net increase of any criteria pollutant, including any pollutants for which the SCAB does not attain applicable federal or State ambient air quality standards during construction.

Table 4-1 Construction Emissions Summary

Year	Emissions (lbs/day) [1]					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
2022	4.83	63.84	29.41	0.13	13.56	6.36
2023	55.14	40.46	43.22	0.10	4.48	2.36
Winter						
2022	4.81	64.53	29.36	0.13	13.56	6.36
2023	55.10	40.59	41.81	0.10	4.48	2.36
Maximum Daily Emissions	**55.14**	**64.53**	**43.22**	**0.13**	**13.56**	**6.36**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: (Urban Crossroads, 2022a, Table 3-5)

Project Operation Impact Analysis

Operation of the Project is expected to generate air pollutant emissions from the operation of motor vehicles (including trucks), operation of on-Site equipment, on-Site maintenance activities, and the consumption of energy resources

The calculated operational-source emissions are summarized on Table 4-2, *Peak Operational Emissions Summary*. Detailed construction model outputs are presented in Appendix 3.2 of the Project's AQ Analysis.

As summarized in Table 4-2, Project-related operational emissions of VOCs, NO_X, CO, SO_X, PM_{10} and $PM_{2.5}$ would not exceed SCAQMD regional criteria thresholds. Accordingly, the Project would not emit substantial concentrations of these pollutants during long-term operation and would not contribute to an existing or projected air quality violation. The Project's long-term emissions of VOCs, NO_X, CO, SO_X, PM_{10} and $PM_{2.5}$ would be less than significant.

Table 4-2 Peak Operational Emissions Summary

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
Area Source	4.63	6.80E-04	0.08	1.00E-05	2.70E-04	2.70E-04
Energy Source	0.01	0.11	0.09	6.60E-04	8.34E-03	8.34E-03
Mobile Source	1.10	8.08	12.33	0.06	3.86	1.11
On-Site Equipment Source	0.11	1.04	0.75	3.17E-03	0.04	0.03
Total Maximum Daily Emissions	**5.86**	**9.22**	**13.25**	**0.07**	**3.91**	**1.16**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Winter						
Area Source	4.63	6.80E-04	0.08	1.00E-05	2.70E-04	2.70E-04
Energy Source	0.01	0.11	0.09	6.60E-04	8.34E-03	8.34E-03
Mobile Source	0.99	8.50	11.09	0.06	3.86	1.11
On-Site Equipment Source	0.11	1.04	0.75	3.17E-03	0.04	0.03
Total Maximum Daily Emissions	**5.74**	**9.64**	**12.01**	**0.06**	**3.91**	**1.16**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: (Urban Crossroads, 2022a, Table 3-8)

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. The following provides an analysis of the Project's potential to expose sensitive receptors in the immediate vicinity of the Project Site to substantial pollutant concentrations during Project construction and long-term operation. The following analysis is based on the applicable significance thresholds established by the SCAQMD.

Localized Emissions Analysis

Table 4-3, *Localized Construction-Source Emissions*, presents the localized impacts at the sensitive receptor locations in the vicinity of the Project Site with highest exposure to Project construction activities. Detailed construction model outputs are presented in Appendix 3.1 of the Project's AQ Analysis. Localized construction emissions from Project construction would not exceed the applicable SCAQMD thresholds for any criteria pollutant.

Table 4-4, *Localized Operations Source Emissions*, presents localized impacts at the sensitive receptor locations in the vicinity of the Project Site with highest exposure to Project operational activities. Detailed construction model outputs are presented in Appendix 3.2 of the Project's AQ Analysis. Localized emissions during Project operation would not exceed the applicable SCAQMD thresholds for any criteria pollutant

Table 4-3 Localized Construction-Source Emissions

Construction Phase	Year	Emissions (lbs/day)			
		NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition	2022	4.48	7.89	1.19	0.34
	Maximum Daily Emissions	**4.48**	**7.89**	**1.19**	**0.34**
	SCAQMD Localized Threshold	280	1,954	124	47
	Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
Site Preparation	2022	50.35	19.98	13.34	6.30
	Maximum Daily Emissions	**50.35**	**19.98**	**13.34**	**6.30**
	SCAQMD Localized Threshold	280	1,954	124	47
	Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
Grading	2022	50.00	25.04	8.48	3.55
	Maximum Daily Emissions	**50.00**	**25.04**	**8.48**	**3.55**
	SCAQMD Localized Threshold	280	1,954	124	47
	Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Source: (Urban Crossroads, 2022a, Table 3-11)

Table 4-4 Localized Operations Source Emissions

Scenario	Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Summer	1.55	1.53	0.24	0.10
Winter	1.57	1.47	0.24	0.10
Maximum Daily Emissions	**1.57**	**1.53**	**0.24**	**0.10**
SCAQMD Localized Threshold	280	1,954	30	12
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Source: (Urban Crossroads, 2022a, Table 3-13)

Based on the information presented in Table 4-3 and Table 4-4, the Project would not result in substantial localized pollutant concentrations during either construction or operation. Impacts would be less than significant.

CO "Hot Spot" Analysis

A CO "hot spot" is an isolated geographic area where localized concentrations of CO exceeds the CAAQS one-hour (20 parts per million) or eight-hour (9 parts per million) standards. A Project-specific CO "hot spot" analysis was not performed because CO attainment in the SCAB was thoroughly analyzed as part of SCAQMD's 2003 AQMP and the 1992 Federal Attainment for Carbon Monoxide Plan (1992 CO Plan) (Urban Crossroads, 2021a, pp. 53-55). The SCAQMD's 2003 AQMP and the 1992 CO Plan found that peak CO concentrations in the SCAB were the byproduct of unusual meteorological and topographical conditions and were not the result of traffic congestion. For context, the CO "hot spot" analysis performed for the 2003 AQMP recorded a CO concentration of 9.3 parts per million (8-hour) at the Long Beach

Boulevard/Imperial Highway intersection in Los Angeles County; however, only a small portion of the recorded CO concentrations (0.7 parts per million) were attributable to traffic congestion at the intersection. The vast majority of the recorded CO concentrations at the Long Beach Boulevard/Imperial Highway intersection (8.6 parts per million) were attributable to unique local meteorological conditions that resulted in elevated ambient air concentrations. In comparison, the busiest intersections in the Project Site vicinity would neither experience peak congestion levels or ambient CO concentrations comparable to the conditions observed at the Long Beach Boulevard/Imperial Highway intersection nor feature atypical meteorological conditions. Further, data from several air districts/studies indicate that under existing and future vehicle emission rates, an individual development project would have to increase traffic volumes at a single intersection by between 24,000 and 44,000 vehicles per hour in order to generate a significant CO impact. The Project would not produce the volume of traffic required to generate a CO hotspot based on the referenced studies. Based on the relatively low local traffic congestion levels, low existing ambient CO concentrations, and the lack of any unusual meteorological and/or topographical conditions in the Project Site vicinity, the Project is not expected to cause or contribute to a CO "hot spot." Impacts would be less than significant.

Diesel Particulate Emissions Analysis

This section evaluates the potential health risk impacts to sensitive receptors and adjacent workers associated with the development of the proposed Project, more specifically, health risk impacts as a result of exposure to Toxic Air Contaminants (TACs) including diesel particulate matter (DPM) as a result of heavy-duty diesel trucks accessing the Project Site. Detailed air dispersion model outputs and risk calculations are presented in Appendices 2.1 through 2.4 of the Project's HRA Analysis.

Project Construction Analysis

The land use with the greatest potential exposure to Project construction DPM source emissions (i.e., maximally exposed individual receptor, MEIR) is located approximately 803 feet south of the Project Site at an existing residence located at 504 South Quince Avenue. At the MEIR, the maximum incremental cancer risk attributable to Project construction DPM source emissions is estimated at 0.51 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. (Urban Crossroads, 2022b, p. 11) All other receptors in the vicinity of the Project Site would experience less risk than what is identified for the MEIR. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction activity.

Project Operation Analysis

The residential land use with the greatest potential exposure to Project operation DPM source emissions (MEIR) is located approximately 803 feet south of the Project Site at an existing residence located at 504 South Quince Avenue. At the MEIR, the maximum incremental cancer risk attributable to Project DPM source emissions is estimated at 0.05 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. (Urban Crossroads, 2022b, p. 23) All other residential receptors in the vicinity of the Project Site would experience less risk than what is identified for the MEIR. Accordingly, long-term operation of the Project would not directly cause or contribute in a cumulatively-considerable manner to the exposure of residential receptors to substantial DPM emissions. Therefore, the Project would result in a less-than-significant impact.

The worker receptor land use with the greatest potential exposure to Project DPM source emissions (maximally exposed individual worker, MEIW) is the existing warehouse located approximately 108 feet east of the Project Site. At the MEIW, the maximum incremental cancer risk impact is 0.04 in one million which is less than the SCAQMD's threshold of 10 in one million. Maximum non-cancer risks at this same location were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. (Urban Crossroads, 2022b, pp. 23-24) All other worker receptors in the vicinity of the Project Site would experience less risk than what is identified for the MEIW. Accordingly, long-term operation of the Project would not directly cause or contribute in a cumulatively-considerable manner to the exposure of worker receptors to substantial DPM emissions. Therefore, the Project would result in a less-than-significant impact.

There are no schools located within 1,200 feet of the Project Site, which is the location with the highest concentrations of Project-related DPM emissions due to trucks idling on the Site. Proximity to sources of toxics is critical to determining the impact. Based on California Air Resources Board and SCAQMD emissions and modeling analyses, particulate matter pollutant concentrations drop by 70 percent at a distance of 500 feet and by 80 percent at 1,000 feet from the emissions source (Urban Crossroads, 2022b, p. 2). Because there are no schools located within at least 0.5-mile of the Project Site, operations at the Project Site would not expose any school child receptors to substantial concentrations of diesel particulate matter emissions (Urban Crossroads, 2022b, p. 24). Notwithstanding the preceding discussion, Project trucks would utilize a travel route (i.e., Cedar Avenue) that is located proximate to the Rialto Middle School and the Charlotte N. Werner Elementary School. Project truck traffic would expose students at these schools to a maximum cancer risk of <0.01 in one million, which would not exceed the significance threshold of 10 in one million, and a maximum non-cancer risk of <0.01, which would not exceed the significance threshold of 1.0 (Urban Crossroads, 2022b, p. 24). Accordingly, off-Site trucking activity related to Project operations would not expose any school child receptors to substantial concentrations of diesel particulate matter emissions. This impact is less than significant.

Conclusion
For the reasons explained under this Response, the Project would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than Significant Impact. Land uses generally associated with odor complaints include: agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass molding facilities (Urban Crossroads, 2022a, p. 59). The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the Project may result from construction equipment exhaust and the application of concrete and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. The Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, the Project would not result in other emissions that would adversely affect a substantial number of people and impacts would be less than significant.

4.4 Biological Resources

Environmental Issue Areas Examined		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
a)	***Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?***	☐	☐	☐	☑
b)	***Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?***	☐	☐	☐	☑
c)	***Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?***	☐	☐	☐	☑
d)	***Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impeded the use of native wildlife nursery sites?***	☐	☐	☑	☐
e)	***Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?***	☐	☐	☐	☑
f)	***Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?***	☐	☐	☐	☑

a) Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact. Under existing conditions, the Project Site is completely disturbed/developed and has been so for the last 20+ years (Google Earth Pro, 2021). The entire Project Site is covered by pavement, gravel, or ornamental landscaping. The surrounding area also is fully developed with urban uses. No natural habitats or plant communities are present on the Project Site and the Project Site is not adjacent to any natural, undeveloped areas. Due to the existing conditions of the Site, the Project would not have a substantial

adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. No impact would occur.

b) Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact. All areas of the Project Site are either paved, covered with gravel or planted with ornamental landscaping; vegetation on the site is limited to ornamental species. There are no riparian habitat or other sensitive natural community on the Project Site. No impact would occur.

c) Would the Project have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The Project Site is completely disturbed and developed and does not contain State or federally protected wetlands. Therefore, implementation of the Project would not have a substantial adverse effect on State or federally protected wetlands through direct removal, filing, hydrological interruption, or other means. No impact would occur.

d) Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impeded the use of native wildlife nursery sites?

Less than Significant Impact. The Project Site is disturbed and does not support a diversity of native wildlife. The Project Site is located in an urbanized area – paved roads, fencing, and developed land surrounding the Project Site block terrestrial wildlife movement from all directions – and the Project Site is not located adjacent to open space areas. Accordingly, re-development of the Site as proposed has no potential to interfere substantially with the ground movement of any resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites. Notwithstanding, the Project Site contains ornamental trees that could serve as nesting habitat for avian species. Although the Project would include the planting of trees, all of the existing trees located on the site would be removed. If any migratory nesting birds are observed in any trees on or near the Site during the Project's construction activities, the birds and their active nests would be protected pursuant to federal and State regulations that protect nesting and migratory birds and a less than significant impact would occur.

Mitigation measures are not required for less than significant impacts and, also, are not required to be duplicative of mandatory regulatory requirements. Nonetheless, a mitigation measure is presented below to ensure adherence to applicable federal and State regulations protecting nesting and migratory birds.

MM BIO-1: If construction commences between February 1 and August 31, within 30 days of mobilizing construction equipment to the Project Site, all on-Site trees and trees within 500 feet of the Project Site shall be inspected by a qualified biologist for the presence of nesting birds. If the survey reveals no active nesting, construction may proceed without restriction. If the survey identifies the presence of active sensitive migratory bird nests,

then the nests shall not be disturbed unless the qualified biologist verifies through non-invasive methods that either (i) the adult birds have not begun egg-laying and incubation; or (ii) the juveniles from the occupied nests are capable of independent survival. If the biologist is not able to verify these conditions, then no disturbance shall occur within a buffer zone specified by the qualified biologist for each nest or nesting site. The buffer zone shall be species-appropriate (no less than 100-foot radius around the nest for non-raptors and no more than a 500-foot radius around the nest for raptors) and shall be sufficient to protect the nest from direct and indirect impacts from construction activities, The size and location of buffer zones, if required, shall be based on consultation with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service and shall be subject to review and approval by the City of Fontana. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved buffer zone shall be marked in the field with construction fencing, within which no vegetation clearing or ground disturbance shall commence until the qualified biologist verifies that any nest is no longer occupied and/or juvenile birds can survive independently from the nests.

e) Would the Project conflict with any local polices or ordinances protecting biological resources, such as tree preservation policy or ordinance?

No Impact. The City does not have any policies or ordinances protecting biological resources that are applicable to the Project Site. No impact would occur.

f) Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation plan, or other approved local, or state habitat conservation plan?

No Impact. The Project Site is not located in an area covered by a Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or State habitat conservation plan has been adopted (CDFW, 2022). Accordingly, the Project has no potential to conflict with any such plans, and no impact would occur.

4.5 Cultural Resources

Environmental Issue Areas Examined		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
a)	***Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?***	☐	☐	☐	☑
b)	***Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?***	☐	☑	☐	☐
c)	***Disturb any human remains, including those interred outside of formal cemeteries?***	☐	☐	☑	☐

The analysis in this section is primarily based on a Cultural Resources Records Search, dated August 9, 2021, collected by Brian F. Smith Associates, Inc. (hereinafter, "BFSA") included as *Technical Appendix C* to this MND.

a) Would the Project cause a substantial adverse change in the significant of historical resources pursuant to §15064.5?

No Impact. Implementation of the Project Site would require the demolition of all structures and improvements that are located on the Project Site under existing conditions. The Project Site contains a vacant, corrugated metal manufacturing building, an outdoor industrial storage area, and associated improvements which were developed by Southland Pipe Corporation in 2001 (Roux, 2021, p. 4). Because the Project Site was recently developed, none of the features on the Site are associated with any historic figures or events or contain any unique distinctive architectural elements and none are identified as previously recorded historic resources (BFSA, 2021, p. 1). Accordingly, none of the features on the Project Site meet the threshold for a consideration as a potential historical resource. Accordingly, the Project would result in no impact to a historical resource as defined by CEQA Guidelines Section 15064.5.

b) Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Less than Significant Impact with Mitigation. BFSA conducted a cultural resources inventory of the Project Site, which included a records search through the SCCIC at CSU Fullerton. According to the archival records search, no cultural resources have been previously recorded on the Project Site and only one previously recorded resource (a historic, single-family residence at 1391 Merrill Avenue) has been recorded within a one-mile radius of the Project Site (BFSA, 2021, p. 1). Thus, the Project Site does not contain any known archaeological resources.

The Project Site is completely disturbed and developed. Due to the low number of known prehistoric archaeological resources in the vicinity of the Project Site, the extensive nature and depth of past ground disturbances on-site, the likelihood of discovering masked or buried prehistoric archaeological resources during Project construction is low. Notwithstanding, past development activities on the Project Site only resulted in site disturbances to approximately 2.5 to 5.5 feet below ground surface (SoCalGeo, 2021, p. 6). Any excavations on-Site that occur within previously undisturbed soils have the potential to contain prehistoric archaeological resources. If any prehistoric cultural resources are unearthed during Project

construction that meet the definition of an archaeological resource pursuant to CEQA Guidelines Section 15064.5 and are disturbed/damaged by Project construction activities, impacts to those prehistoric cultural resources would be significant.

The following mitigation measures address the potential for Project construction activities to impact significant archaeological resources that may be discovered during ground-disturbing construction activities. With implementation of the following mitigation measures, impacts would be less than significant.

MM CR-1 Prior to the issuance of a grading permit, the Project Applicant shall provide evidence to the City of Rialto that an archaeologist that meets the latest version of the Secretary of the Interior Professional Qualifications Standards (hereafter "Project Archaeologist") has been retained to conduct the training and monitoring activities described in Mitigation Measure CR-2 and Mitigation Measure CR-3.

MM CR-2 Prior to the issuance of a grading permit, the Project Applicant or construction contractor shall provide evidence to the City of Rialto that the construction site supervisors and crew members involved with grading and trenching operations have received training by the Project Archaeologist to recognize prehistoric archaeological resources (historic and prehistoric) should such resources be unearthed during ground-disturbing construction activities. The training will include a brief review of the cultural sensitivity of the area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of archaeological resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new supervisorial construction personnel involved with grading and trenching operations that begin work on the Project Site after the initial training session must take the training prior to beginning work on-site.

MM CR-3 The Project Archaeologist shall conduct monitoring during all grading, trenching, and excavation activities that occur within previously undisturbed on the Project Site (i.e., soils below the on-site layer of artificial fill). The Project Archaeologist shall be equipped to salvage artifacts if they are unearthed to avoid construction delays. Should the Project Archaeologist determine that there are no archaeological resources within the Project's disturbance area or should the archaeological sensitivity be reduced to low during construction activities, archaeological monitoring activities can be reduced to spot-checking or may shall be allowed to cease.

MM CR-4 If a suspected significant archaeological resource is found, the construction supervisor shall immediately halt grading operations within a 50-foot radius around the find ("buffer area"), redirect grading operations outside of the buffer area, and seek identification and evaluation of the suspected resource by the Project Archaeologist. This requirement shall be noted on all grading plans and the construction contractor shall be obligated to comply with the note. The Project Archaeologist shall evaluate the suspected resource and make a determination of significance pursuant to CEQA Guidelines Section 15064.5 and California Public Resources Code Section 21083.2. If the resource is significant, Mitigation Measure CR-5 shall apply.

MM CR-5 If a significant archaeological resource is discovered, ground disturbing activities shall be suspended 50 feet around the resource until a treatment plan is implemented. A treatment plan shall be prepared and implemented, subject to approval by the City of Rialto, to protect the identified resource(s) from damage and destruction. The treatment plan shall contain a research design and data recovery program necessary to document the size and content of the discovery such that the resource(s) can be evaluated for significance under CEQA criteria. The research design shall list the sampling procedures appropriate to exhaust the research potential of the archaeological resource(s) in accordance with current professional archaeology standards. In the event the discovered resource(s) is or suspected to be of Native American origin, the treatment plan shall require monitoring by the appropriate Native American Tribe(s) during data recovery and shall require that all recovered artifacts undergo basic field analysis and documentation or laboratory analysis, whichever is appropriate. At the completion of the basic field analysis and documentation or laboratory analysis, any recovered resource(s) shall be processed and curated according to current professional repository standards. The collections and associated records shall be donated to an appropriate curation facility, or, the artifacts may be delivered to the appropriate Native American Tribe(s) if that is recommended by the City of Rialto. A final report containing the significance and treatment findings shall be prepared by the archaeologist and submitted to the City of Rialto, the South Central Coastal Information Center at California State University, Fullerton, and the appropriate Native American Tribe(s).

c) Would the Project disturb any human remains, including those interred outside of formal cemeteries?

No Impact. The Project Site does not contain a cemetery and no known formal cemeteries are located within the immediate site vicinity (Google Earth, 2021). In the remote chance that human remains are unearthed during Project construction, the construction contractor would be required by law to comply with California HSC Section 7050.5 "Disturbance of Human Remains." According to Section 7050.5(b) and (c), if human remains are discovered, the County Coroner must be contacted and if the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner is required to contact the Native American Heritage Commission (NAHC) by telephone within 24 hours. Pursuant to California Public Resources Code Section 5097.98, whenever the NAHC receives notification of a discovery of Native American human remains from a county coroner, the NAHC is required to immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. According to Public Resources Code Section 5097.94(k), the NAHC is authorized to mediate disputes arising between landowners and known descendants relating to the treatment and disposition of Native American human burials, skeletal remains, and items associated with Native American burials. With mandatory compliance to California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98, any potential impacts to human remains, including human remains of Native American ancestry, that may result from development of the Project would be less than significant.

4.6 Energy

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☑	☐
b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	☐	☐	☑	☐

The analysis in this section is based on the *Durst Drive Warehouse Energy Analysis* (Energy Analysis) report prepared by Urban Crossroads, Inc. (Urban Crossroads) dated January 26, 2022. The Energy Analysis is provided in its entirety as *Technical Appendix D* of the IS/MND (Urban Crossroads, 2022c).

a) Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than Significant Impact. As demonstrated by the analysis below, construction and operation of the Project would result in a less than significant environmental impact related to energy consumption.

Project Construction Energy Use

The Project's construction process would consume electricity and fuel. Project-related construction activities would represent a "single-event" demand and would not require on-going or permanent commitment of energy resources. Project-related construction activities are estimated to consume approximately 82,445 kWh of electricity, approximately 117,251 gallons of diesel fuel from operation of construction equipment, 16,299 gallons of diesel fuel from construction vendor and hauling trips, and 17,810 gallons of fuel from construction worker trips (Urban Crossroads, 2022c, pp. 25-28). The amount of energy and fuel use anticipated by the Project's construction activities are typical for the type of construction proposed because there are no aspects of the Project's proposed construction process that are unusual or unnecessarily energy-intensive. Furthermore, construction equipment would be required to conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies. For example, CCR Title 13, Motor Vehicles, Section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. As supported by the preceding discussion, the Project's construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary (Urban Crossroads, 2022c, p. 29).

Project Operation Energy Use

Project operations are estimated to consume 106,321 gallons of fuel on an annual basis (Urban Crossroads, 2022c, p. 30). The number of daily trips and miles traveled by Project traffic are consistent with other warehouse uses of similar scale and configuration (Urban Crossroads, 2022c, pp. 32-34). That is, the Project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips and/or vehicle miles traveled, nor associated excess and wasteful vehicle energy consumption. Enhanced fuel economies realized pursuant to federal and State regulatory actions, and

related transition of passenger vehicles to alternative energy sources (e.g., electricity, natural gas, bio fuels, hydrogen cells) would likely decrease future gasoline fuel demands per mile traveled. Further, the location of the Project Site proximate to regional and local arterial roadways is expected to minimize the Project vehicle miles traveled within the region. Based on the foregoing, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

Building operations and site maintenance activities associated with the Project would result in the consumption of natural gas and electricity. Natural gas would be supplied to the Project by Southern California Gas Company; electricity would be supplied to the Project by Southern California Edison (SCE). Energy demands resulting from Project operations are estimated at 408,736 kilo-British thermal units (kBTU) per year of natural gas and 488,613 Kilowatt-hour (kWh) per year of electricity (Urban Crossroads, 2022c, pp. 33-34). The Project includes contemporary energy efficient/energy conserving designs and operational programs. Uses proposed by the Project are not inherently energy intensive, and the Project energy demands in total would be comparable to, or less than, other industrial projects of similar scale and configuration. Additionally, the Project would be required to comply with Title 24 standards, which would ensure that the Project's energy demand would not be considered inefficient, wasteful, or otherwise unnecessary. (Urban Crossroads, 2022c, p. 34)

b) Would the Project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Less than Significant Impact. The following section analyzes the Project's consistency with the applicable federal and State regulations.

Consistency with Federal Energy Regulations

Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)

Transportation and access to the Project Site is provided by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTEA because SCAG is not planning for intermodal facilities on or through the Project Site. (Urban Crossroads, 2022c, p. 36)

The Transportation Act for the 21st Century (TEA-21)

The Project Site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access, acts to reduce vehicle miles traveled, takes advantage of existing infrastructure systems, and promotes land use compatibilities through collocation of similar uses. The Project supports the strong planning processes emphasized under TEA-21. The Project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of TEA-21. (Urban Crossroads, 2022c, p. 36)

Consistency with State Energy Regulations

Integrated Energy Policy Report (IEPR)

Electricity would be provided to the Project by SCE. SCE's *Clean Power and Electrification Pathway* (CPEP) white paper builds on existing state programs and policies. As such, the Project is consistent with, and would not otherwise interfere with, nor obstruct implementation the goals presented in the 2020 IEPR. (Urban Crossroads, 2022c, pp. 17-18)

State of California Energy Plan
The Project Site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access and takes advantage of existing infrastructure systems. The Project therefore supports urban design and planning processes identified under the State of California Energy Plan, is consistent with, and would not otherwise interfere with, nor obstruct implementation of the State of California Energy Plan. (Urban Crossroads, 2022c, p. 37)

California Code Title 24, Part 6, Energy Efficiency Standards
The Project would design building shells and building components, such as windows; roof systems: electrical and lighting systems: and heating, ventilating, and air conditioning systems to meet 2019 Title 24 Standards. The Project also is required by State law to be designed, constructed, and operated to meet or exceed Title 24 Energy Efficiency Standards. On this basis, the Project is determined to be consistent with, and would not interfere with, nor otherwise obstruct implementation of Title 24 Energy Efficiency Standards. (Urban Crossroads, 2022c, p. 37)

California Code Title 24, Part 11, CALGreen
CALGreen is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2009, and is administered by the California Building Standards Commission. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2019 California Green Building Code Standards that became effective January 1, 2020. The proposed Project would be subject to CALGreen standards. (Urban Crossroads, 2022c, p. 37)

Pavley Fuel Efficiency Standards (AB 1493)
AB 1493 is not directly applicable to the Project as it is a statewide measure establishing vehicle emissions standards; however, is indirectly applicable to the Project because passenger cars and light duty trucks traveling to and from the Project Site are required to comply with the legislation's fuel efficiency requirements. No feature of the Project would interfere with implementation of the requirements under AB 1493. (Urban Crossroads, 2022c, p. 37)

Advanced Clean Cars Program
The Advanced Clean Cars Program is indirectly applicable to the Project because model year 2017-2025 passenger car vehicles traveling to and from the Project Site are required by law to comply with the legislation's fuel efficiency requirements. On this basis, the Project is determined to be consistent, with, and would not interfere with, nor otherwise obstruct implementation of California's Advanced Clean Cars Program.

California Renewable Portfolio Standards (SB 1078)
Established under SB 1078, the California Renewable Portfolio Standards do not directly apply to the Project as it is a statewide measure that establishes a renewable energy mix. Energy directly or indirectly supplied to the Project Site by electric corporations is required by law to comply with SB 1078. On this basis, the Project is determined to be consistent, with, and would not interfere with, nor otherwise obstruct implementation of California Renewable Portfolio Standards. (Urban Crossroads, 2022c, p. 37)

Clean Energy and Pollution Reduction Act (SB 350)
The proposed Project would use energy from SCE, which has committed to diversify their portfolio of energy sources by increasing energy from wind and solar sources. No feature of the Project would interfere with implementation of SB 350. Additionally, the Project would be designed and constructed to

implement the energy efficiency measures required of new industrial developments. (Urban Crossroads, 2022c, p. 37)

Conclusion

As supported by the preceding analysis, the Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency and a less-than-significant impact would occur.

4.7 Geology and Soils

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☑
ii) Strong seismic ground shaking?	☐	☐	☑	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☑
iv) Landslides?	☐	☐	☐	☑
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☑	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☑	☐
d) Be located on expansive soil, as defined in Table 18- 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☑
e) Have soils incapable of adequately supporting the use septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☑
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☑	☐	☐

A report titled *Updated Geotechnical Investigation Proposed Commercial/Industrial Building 1230 West Durst Drive* and dated March 31, 2021 (Geologic Investigation) was prepared by Southern California Geotechincal (SoCalGeo) to evaluate the existing conditions of subject property, identify geologic hazards, and provide recommendations for development of the Project (SoCalGeo, 2021). Information from this report is utilized in the analysis below and the report is included as Technical Appendix E to the IS/MND.

a) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- ***i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?***
- ***ii) Strong seismic ground shaking?***
- ***iii) Seismic-related ground failure, including liquefaction?***
- ***iv) Landslides?***

The Project's potential impacts related to earthquake hazards are discussed below.

i) Earthquake Fault Rupture

No Impact. There are no known active or potentially active faults on or trending toward the Project Site and the Project Site is not located within a mapped Alquist-Priolo Earthquake Fault Zone (SoCalGeo, 2021, pp. 10-11). Because there are no known faults located on or trending towards the Project Site, the Project would not directly or indirectly expose people or structures to substantial adverse effects related to rupture of a known earthquake fault.

ii) Strong Seismic Shaking

Less-than-Significant Impact. The Project Site is located in a seismically active area of southern California and is expected to experience moderate to severe ground shaking during the lifetime of the Project. This risk is not considered substantially different to other similar properties in the southern California area. As a mandatory condition of Project approval, the Project Applicant would be required to construct the proposed building in accordance with the CBSC and the Rialto Building Code, which is based on the CBSC with local amendments (Rialto Municipal Code, Sections 15.08.060 and 15.08.080). The CBSC and Rialto Building Code provide standards that must be met to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures, and have been specifically tailored for California earthquake conditions. In addition, the CBSC (Chapter 18) and the Rialto Municipal Code (Sections 11.12.070 and 17.24.010) require development projects to prepare geologic engineering reports to identify site-specific geologic and seismic conditions and implement the site-specific recommendations contained therein, including, but not limited to, recommendations related to ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems in order to preclude adverse effects involving unstable soils and strong seismic ground-shaking. The Project Applicant retained a professional geotechnical firm, SoCalGeo, to prepare a Geologic Investigation for the Project Site, which is included as Technical Appendix E to the IS/MND. The Geologic Investigation included recommendations for design, construction, and grading considerations based on the site-specific geological conditions and Project-specific design. The recommendations included seismic design considerations, geotechnical design considerations, site grading recommendations, construction considerations, foundation design and construction, floor slab design and construction, and pavement design parameters. This Geotechnical Investigation complies with the requirements of Chapter 18 of the CBSC and Sections 11.12.070 17.24.010 of the Rialto Municipal Code. In conformance with the Municipal Code, the City will condition the Project Applicant to comply with the site-specific ground preparation and construction recommendations contained in the Geologic Investigation. With mandatory compliance with building code standards and site-specific design and construction measures, implementation of the Project would not directly or indirectly expose people or structures to substantial adverse effects, including loss, injury, or death, involving seismic ground shaking. Impacts would be less than significant.

iii) Seismic-Related Ground Failure

No Impact. Due to the observed soil characteristics on the Project Site and the lack of shallow groundwater beneath the site, liquefaction potential is considered to be nil (SoCalGeo, 2021, p. 12). Regardless, as noted above, the City will require the Project Site be developed in accordance with the latest applicable seismic safety guidelines, including the standard requirements of the CBSC and the Rialto Building Code, to minimize potential liquefaction hazards. In addition, the Project Applicant would be required via conditions of approval to comply with the grading and construction recommendations contained within the Geologic Investigation for the Project Site to further reduce the risk of seismic-related hazards, including ground failure due to liquefaction. Therefore, implementation of the Project would not directly or indirectly expose people or structures to substantial hazards associated with seismic-related ground failure and/or liquefaction hazards. Impacts would be less than significant.

iv) Seismically Induced Landslides

No Impact. According to the CDC Earthquake Zones of Required Investigation Map, the Project Site is not within a landslide zone (CDC, 2019a). Further, no sizable slopes are located on or adjacent to the Project Site (Google Earth Pro, 2021). The Project is not anticipated to expose people or structures to seismic-related landslides. No impact would occur.

b) Would the Project result in substantial soil erosion or the loss of topsoil?

Less-than-Significant Impact. Erosion is the movement of rock and soil from place to place and is a natural process. Common agents of erosion in the Project region include wind and flowing water. Significant erosion typically occurs on steep slopes where stormwater and high winds can carry topsoil down hillsides. Erosion can be increased greatly by earthmoving activities if erosion-control measures are not employed.

The Project Site is fully developed and contains ornamental landscaping along the perimeter of the site. Due to the developed nature of the Project Site, erosion occurring on-site is minimal – if any – under existing conditions.

Grading and earthwork activities associated with Project construction would expose soils to potential short-term erosion by wind and water. The Project Applicant would be required to obtain coverage under the State's General Construction Storm Water Permit for construction activities (NPDES permit). The NPDES permit is required for all development projects that include construction activities, such as clearing, grading, and/or excavation, that disturb at least one (1) acre of total land area. In addition, the Project Applicant would be required to comply with the Santa Ana RWQCB's *Santa Ana River Basin Water Quality Control Program*. Compliance with the NPDES permit and the Santa Ana River Basin Water Quality Control Program involves the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) for construction-related activities. The Project's SWPPP will specify the Best Management Practices (BMPs) that the Project Applicant will be required to implement during construction activities to ensure that waterborne pollution – including erosion/sedimentation – is prevented, minimized, and/or otherwise appropriately treated prior to surface runoff being discharged from the subject property. Examples of BMPs that may be utilized during construction include, but are not limited to, sandbag barriers, geotextiles, storm drain inlet protection, sediment traps, rip rap soil stabilizers, and hydro-seeding. Lastly, the Project Applicant would be required to implement erosion control measures to minimize water- and windborne erosion pursuant to Rialto Municipal Code Section 17.40.010 (and to ensure compliance with SCAQMD Rule 403). Mandatory compliance with the SWPPP and the erosion control measures would ensure that the Project's implementation does not violate any water quality

standards or waste discharge requirements during construction activities. Therefore, erosion impacts associated with Project construction activities would be less than significant.

Long-term operational impacts related to soil erosion or loss of topsoil would be precluded by compliance with regulatory measures. To meet the requirements of the City's Municipal Storm Water Permit, and in accordance with Rialto Municipal Code Section 12.60.260, the Project Applicant would be required to prepare and implement a Water Quality Management Plan (WQMP), which is a site-specific post-construction water quality management program designed to minimize the release of potential waterborne pollutants. The WQMP is required to identify an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate sediment discharge to surface water from storm water and non-storm water discharges. The preliminary WQMP for the Project, which is provided as Technical Appendix H to the IS/MND, identifies non-structural source control BMPs (such as vacuum sweeping of parking lots as part of routine maintenance), structural source control BMPs (such as utilizing efficient irrigation systems that minimize overspray), and preventive, low impact development BMPs (such as the use of permeable surfaces across the site, catch basin inserts, and an underground retention system) to minimize erosion. The WQMP also is required to establish a post-construction implementation and maintenance plan to ensure on-going, long-term erosion protection. Compliance with the WQMP will be required as a condition of approval for the Project, as will the long-term maintenance of erosion and sediment control features. Because the Project would be required to utilize erosion and sediment control measures to preclude substantial, long-term soil erosion and loss of topsoil, the Project would result in less-than-significant impacts related to soil erosion.

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

Less than Significant Impact. As noted under Response 4.7(a), the Project Site is not located within a landslide zone. Additionally, the Project Site and surrounding areas are fully developed and do not have natural or manufactured slopes. The Project would not be located on a geologic unit or soil that is unstable that would result in on- or off-site landslides. No impact would occur.

Lateral spreading is a phenomenon in which large blocks of intact, non-liquefied soil move downslope on a liquefied soil layer. Lateral spreading is a regional event. For lateral spreading to occur, the liquefiable soil zone must be laterally continuous, unconstrained laterally, and free to move along the sloping ground. The Project Site's potential for lateral spreading is considered low due to the site's relatively flat topography, distance from slopes, and no potential for liquefaction (as noted under Response 4.7(a)). The Project would not be located on a geologic unit or soil that would result in lateral spreading. No impact would occur.

With respect to shrinkage and subsidence, removal and re-compaction of the existing fill soils and near-surface alluvium is estimated to result in an average shrinkage of 5 to 15 percent (SoCalGeo, 2021, p. 14). In addition, compressible/collapsible were encountered in soil borings performed on-Site (SoCalGeo, 2021, p. 14). However, the Project's Geologic Investigation indicates that the Site's potential for shrinkage/subsidence, settlement, and collapse can be attenuated through the removal of surface and near surface soils down to competent materials and replacement with properly compacted fill (SoCalGeo, 2021, pp. 12-17). As described in Response 4.7(a), the City will condition the Project to comply with the site-specific ground preparation and construction recommendations contained in the Project's Geologic

Investigation, which would preclude potential soil hazards. Based on the foregoing, potential impacts related to soil shrinkage/subsidence and collapse would be less than significant.

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

No Impact. The near-surface soils consist of sands and silty sands with no appreciable clay content. These materials were visually classified by SoCalGeo as non-expansive (SoCalGeo, 2021, p. 13). Accordingly, the Project would not create substantial risks to life or property from exposure to expansive soils. No impact would occur.

e) Would the project have soils incapable of adequately supporting the use septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The Project does not propose the use of septic tanks or alternative waste water disposal systems. No impact would occur.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant with Mitigation Incorporated. The Project Site is underlain near the surface with young alluvial fan deposits, which have a low paleontological sensitivity (Rialto, 2010b, Exhibit 4.6.2). However, at depth, it is possible that Project construction activities could encroach into previously undisturbed Pleistocene older alluvium, which has a high paleontological sensitivity. Accordingly, although the Project Site is not known to contain unique paleontological resources or unique geologic features, there is nonetheless the potential that Project- related grading activities could uncover and impact paleontological resources. The Project's potential to directly or indirectly destroy unique paleontological resources buried beneath the ground surface is a significant impact and mitigation is required

Implementation of MM GEO-1 through MM GEO-4 would ensure the proper identification and subsequent treatment of any paleontological resources that may be encountered during ground-disturbing activities associated with implementation of the proposed Project. Therefore, with implementation of MM GEO-1 through MM GEO-4, the Project's potential impacts related to paleontological resources would be reduced to less-than-significant levels.

MM GEO-1 Prior to the issuance of a grading permit, the Project Applicant shall provide evidence to the City of Rialto that a qualified paleontologist ("paleontologist") has been retained by the Project Applicant or contractor to conduct monitoring of excavation activities and has the authority to halt and redirect earthmoving activities in the event that suspected paleontological resources are unearthed.

MM GEO-2 The paleontologist shall conduct full-time monitoring during grading and excavation operations in undisturbed, Pleistocene older alluvium soils (occurring in excess of 2.5 to 5 feet below ground surface) and shall be equipped to salvage fossils if they are unearthed to avoid construction delays and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. The paleontologist shall be empowered to temporarily halt or divert equipment to allow for the removal of abundant and large specimens in a timely manner. Monitoring may be reduced if the potentially

fossiliferous units are not present in the subsurface, or if present, are determined upon exposure and examination by the paleontologist to have a low potential to contain or yield fossil resources.

MM GEO-3 Recovered specimens shall be properly prepared to a point of identification and permanent preservation, including screen washing sediments to recover small invertebrates and vertebrates, if necessary. Identification and curation of specimens into the collections of the Division of Geological Sciences, San Bernardino County Museum, shall be required for discoveries of significance as determined by the paleontological monitor.

MM GEO-4 A final monitoring and mitigation report of findings and significance shall be prepared, including lists of all fossils recovered, if any, and necessary maps and graphics to accurately record the original location of the specimens. The report shall be submitted to the City of Rialto prior to issuance of the first occupancy permit.

4.8 Greenhouse Gas Emissions

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☑	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☑	☐

The analysis below is based on the *Durst Drive Warehouse Greenhouse Gas Analysis* (GHG Analysis) report prepared by Urban Crossroads, Inc. (Urban Crossroads) dated January 26, 2022. The GHG Analysis is provided in its entirety as Technical Appendix F of the IS/MND (Urban Crossroads, 2022d).

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant Impact. While estimated Project-related GHG emissions can be calculated, the direct impacts of such emissions on global climate change (GCC) and global warming cannot be determined on the basis of available science because GCC is a global phenomenon and not limited to a specific locale such as the Project Site and its immediate vicinity. Furthermore, there is no evidence that would indicate that the emissions from a project the size of the proposed Project could directly or indirectly affect the global climate. Because global climate change is the result of GHG emissions, and GHGs are emitted by innumerable sources worldwide, the proposed Project would not result in a direct impact to global climate change; rather, Project- related impacts to global climate change only could be potentially significant on a cumulative basis. Therefore, the analysis below focuses on the Project's potential to contribute to global climate change in a cumulatively- considerable way. (Urban Crossroads, 2022d, p. 16)

The City of Rialto has not adopted a numerical threshold for determining the significance of GHG emissions; however, the City has discretion to select an appropriate significance criterion used by other agencies, based on substantial evidence. Specifically, the City has selected the 3,000 $MTCO_2e$ per year threshold recommended by SCAQMD staff for residential and commercial sector projects against which to compare Project-related GHG emissions. If Project-related GHG emissions do not exceed the 3,000 $MTCO_2e$ per year threshold, then Project-related GHG emissions would clearly have a less-than- significant impact. On the other hand, if Project-related GHG emissions exceed 3,000 $MTCO_2e$ per year, the Project would be considered a substantial source of GHG emissions.

The annual GHG emissions associated with the Project are summarized in Table 4-5. The methodology used to calculate the Project's GHG emissions is described in detail in Technical Appendix F.

Table 4-5 Annual Project GHG Emissions Summary

Emission Source	Emissions (MT/yr)			
	CO_2	CH_4	N_2O	Total CO_2e
Annual construction-related emissions amortized over 30 years	26.64	4.94E-03	9.27E-04	27.04
Area Source	0.02	5.00E-05	0.00	0.02
Energy Source	108.47	7.73E-03	1.29E-03	109.04
Mobile Source	964.89	0.04	0.11	998.60
On-Site Equipment	50.75	0.02	0.00	51.16
Waste	38.80	2.29	0.00	96.13
Water Usage	123.51	1.54	0.04	173.16
Total CO_2e (All Sources)	**1,455.16**			

Source: (Urban Crossroads, 2022d, Table 4-6)

As shown above, the Project will result in approximately 1,455.16 $MTCO_2e$ emissions annually, which would not exceed the significance threshold of 3,000 $MTCO_2e$ per year. Therefore, the Project would not generate substantial GHG emissions – either directly or indirectly – that would have a significant impact on the environment. Impacts would be less than significant.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant Impact. The Project would not conflict with applicable regulations, policies, plans, and policy goals that would reduce GHG emissions, as described below. The City of Rialto does not have any GHG-reduction plans, policies, or regulations; therefore, the analysis below addresses the Project's consistency with applicable State GHG-reduction plans, policies, and regulations.

The Project would provide for the construction and operation of a warehouse building that would include contemporary, energy-efficient/energy-conserving design features and operational procedures. Warehouse land uses are not inherently energy intensive and the total Project energy demands would be comparable to, or less than, other goods movement projects of similar scale and configuration due to the Project's modern construction and requirement to be constructed in accordance with the most recent CBSC. The CBSC includes the California Energy Code, or Title 24, Part 6 of the California Code of Regulations, also titled The Energy Efficiency Standards for Residential and Nonresidential Buildings. The California Energy Code was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated approximately every three years to improve energy efficiency by allowing incorporating new energy efficiency technologies and methods. The Project would be required to comply with all applicable provisions of the CBSC. As such, the Project's energy demands would be minimized through design features and operational programs that, in aggregate, would ensure that Project energy efficiencies would comply with – or exceed – incumbent CBSC energy efficiency requirements, thereby minimizing GHG emissions produced from energy consumption.

The California Air Resources Board (CARB) *Scoping Plan* identifies strategies to reduce California's GHG emissions in support of AB32, which required the State to reduce its GHG emissions to 1990 levels by

2020. CARB updated the *Scoping Plan* in 2017 to identify additional measures that would achieve the emissions reductions goals of SB 32, which requires the State to reduce its GHG emissions to 40 percent below 1990 levels by 2030. According to research conducted by the Lawrence Berkeley National Laboratory and supported by the CARB, California, under its existing and proposed GHG reduction policies (i.e., CARB *Scoping Plan*), is on track to meet the years 2020 and 2030 reduction targets established by AB 32 and SB 32, respectively (Urban Crossroads, 2022d, p. 37). As explained in point-by-point detail in Section 3.7 of the Project's GHG Analysis (refer to Table 3-8), the Project would not conflict with applicable measures of the CARB Scoping Plan and would not preclude/obstruct implementation of the *Scoping Plan* or achievement of the GHG emissions goals of AB 32 or SB 32.

In April 2015, Governor Edmund Brown Jr. signed EO B-30-15, which advocated for a statewide GHG-reduction target of 80 percent below 1990 levels by 2050. To date, no statutes or regulations have been adopted to translate the year 2050 GHG reduction goal into comparable, scientifically- based statewide emission reduction targets. Rendering a significance determination for year 2050 GHG emissions relative to EO B-30-15 would be speculative because EO B-30-15 establishes a goal more than three decades into the future; no agency with GHG subject matter expertise has adopted regulations to achieve these statewide goals at the project-level; and, available analytical models cannot presently quantify all project-related emissions in those future years. Further, due to the technological shifts anticipated and the unknown parameters of the regulatory framework in 2050, available GHG models and the corresponding technical analyses are subject to limitations for purposes of quantitatively estimating the Project's emissions in 2050.

Based on the foregoing analysis, the Project would not conflict with the State's ability to achieve the State-wide GHG reduction mandates and would be consistent with applicable policies and plans related to GHG emissions reductions. Impacts would be less than significant.

4.9 Hazards and Hazardous Materials

Environmental Issue Areas Examined		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
a)	***Create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials?***	☐	☐	☑	☐
b)	***Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?***	☐	☐	☑	☐
c)	***Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?***	☐	☐	☑	☐
d)	***Be located on a site which is included on a list of hazardous materials sites which complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?***	☐	☐	☐	☑
e)	***For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?***	☐	☐	☐	☑
f)	***Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?***	☐	☐	☑	☐
g)	***Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?***	☐	☐	☐	☑

This section is primarily based on the *Phase I Environmental Site Assessment* (Phase I ESA), prepared by Roux Associates, Inc. (hereinafter, "Roux"), dated April 12, 2021. The Project-specific Phase I ESA is included as Technical Appendix G to the IS/MND.

a) Would the Project create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials?

Less-than-Significant Impact. A significant impact may occur if a project would involve the use or disposal of hazardous materials as part of its routine operations, or would have the potential to generate toxic or

otherwise hazardous emissions that could adversely affect sensitive receptors. The analysis below addresses the potential for hazardous materials effects associated with the existing condition of the Project Site, constructing the proposed Project, and/or operating the Project.

Existing Project Site Conditions

The Project Site consisted of undeveloped land until the 1930s, at which time it was developed for agricultural use (row crops). The Project Site remained developed for agricultural use through approximately 1980. Although it is likely that agricultural chemicals were used on the Project Site, the application of such chemicals is presumed to not have been intensive because row crops historically received lesser applications of agricultural chemicals than orchards. A soil investigation performed on the Project Site did not identify remnants of agricultural chemicals above action levels or regional background concentrations. (Roux, 2021, p. 27) Thus, the historic use of the Project Site for agriculture does not create a significant hazard to the public or the environment.

The Project Site was redeveloped by Southland Pipe Corporation in 2001. Southland Pipe Corporation utilized the Project Site as a pipe manufacturing facility until December 2020, when it vacated and ceased operations on the Site. During site reconnaissance, Roux observed discolored or spill areas and electrical transformers and, also, observed off-Site rail cars/railroad spurs (Roux, 2021, pp. 19-20). The observed staining was located on a concrete floor at the location of a former machine shop building. The staining did not appear recent and no equipment or containers were observed in the vicinity, nor were any cracks observed in the concrete floor. Roux concluded that the observed staining was not an environmental concern. One pad mounted transformer was observed at the Project Site; no staining was observed at the base of the transformer. Based on the construction date and appearance of the transformer, Roux concluded it did not have potential to contain polychlorinated biphenyls (PCBs) and was not considered to be an environmental concern. A rail line (current Metrolink rail) was observed abutting the project Site on the north. According to historical sources, the railroad was constructed prior to 1896, and the materials historically transported along the railroad are unknown. No evidence of a likely release associated with the rail lines was identified during the course of the Phase I ESA. Based on the available information, the adjoining railroad is considered to be an "environmental feature" but does not constitute a recognized hazard to the Project Site or the environment.

Based on the foregoing information, there are no existing conditions or features on the Project Site that would represent a substantial hazard to the public or the environment.

Project Construction Activities

Heavy equipment (e.g., dozers, excavators, tractor) would operate on the subject property during construction of the Project. Heavy equipment is typically fueled and maintained by petroleum-based substances such as diesel fuel, gasoline, oil, and hydraulic fluid, which is considered hazardous if improperly stored or handled. Also, materials such as paints, adhesives, solvents, and other substances typically used in building construction would be located on the Project Site during construction. Improper use, storage, or transportation of hazardous materials can result in accidental releases or spills, potentially posing health risks to workers, the public, and the environment. This is a standard risk on all construction sites, and there would be no greater risk for improper handling, transportation, or spills associated with the proposed Project than would occur on any other similar construction site. Construction contractors would be required to comply with all applicable federal, State, and local laws and regulations regarding the transport, use, and storage of hazardous construction-related materials, including but not limited requirements imposed by the Environmental Protection Agency (EPA), US Department of Transportation regulations listed in the Code of Federal Regulations (Title 49, Hazardous Materials Transportation Act);

California Department of Transportation standards; California Department of Toxic Substances Control (DTSC), SCAQMD, Santa Ana Regional Water Quality Control Board (RWQCB), and the California Department of Industrial Relations Division of Occupational Safety and Health (DOSH), better known as Cal/OSHA. With mandatory compliance to applicable hazardous materials regulations, the Project would not create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials during the construction phase. Impacts would be less than significant.

Project Operational Activities

The Project Site would be used as a warehouse distribution facility. There is the potential for hazardous materials (e.g., diesel fuel, cleansers, lubricants) to be used during the course of normal daily operations at the Project Site with these types of users. State and federal Community-Right-to-Know laws allow the public access to information about the amounts and types of chemicals that may be used by businesses on the Project Site. Laws also are in place that require businesses to plan and prepare for possible chemical emergencies. Any business that occupies the building on the Project Site and that handles/stores substantial quantities of hazardous materials (as defined in Section 25500 of California Health and Safety Code, Division 20, Chapter 6.95) will require a permit from the San Bernardino County Fire Department, Hazardous Materials Division in order to register the business as a hazardous materials handler. Such businesses also are required to comply with California's Hazardous Materials Release Response Plans and Inventory Law, which requires immediate reporting to the San Bernardino County Fire Department and the State Office of Emergency Services regarding any release or threatened release of a hazardous material, regardless of the amount handled by the business, and to prepare a Hazardous Materials Business Emergency Plan (HMBEP). An HMBEP is a written set of procedures and information created to help minimize the effects and extent of a release or threatened release of a hazardous material. With mandatory regulatory compliance, potential hazardous materials impacts associated with long-term operation of the Project would be less than significant.

b) *Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Less-than-Significant Impact. As could occur during any redevelopment project of similar scale to the proposed Project, there is a possibility of accidental release of hazardous substances during construction activities, such as petroleum-based fuels or hydraulic fluid used for construction equipment. The level of risk associated with the accidental release of hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials utilized during construction. The construction contractor would be required to use standard construction controls and safety procedures pursuant to City of Rialto Municipal Code Title 8 (Health, Safety, and Welfare), California Health and Safety Code Section 25500, and Cal/OSHA requirements to avoid and minimize the potential for accidental release and to ensure that materials are appropriately contained and remediated as required by local, State, and federal law.

Project Construction Activities

The Project would comply with the requirements of applicable laws and regulations governing upsets and accidents including the requirements of the hazardous materials disclosure program, the California Accidental Release Prevention Program, the hazardous materials release response plans and inventory program, and California Health and Safety Code Section 25500. Additionally, adherence to the City of Rialto Municipal Code Title 15, *Buildings and Construction*, and emergency response plan requirements would be required through the duration of the Project construction phase.

These requirements would ensure that all potentially hazardous materials are handled in an appropriate manner and would minimize the potential for upset and accident conditions. For example, all spills or leakage of petroleum products during construction activities are required to be immediately contained, the hazardous material identified, and the material remediated in compliance with applicable State and local regulations for the cleanup and disposal of that contaminant. All contaminated waste would be required to be collected and disposed of at an appropriately licensed disposal or treatment facility. With mandatory compliance to regulatory requirements, the potential for impacts during construction is considered less than significant.

Project Operational Activities

Regulatory requirements pertaining to upsets and accidents following during the construction phase would also be implemented during the operational phase. Both the federal government and the State of California (Health and Safety Code, Division 20, Chapter 6.95, Sections 25500–25520; 19 CCR, Chapter 2, Subchapter 3, Article 4, Sections 2729–2734) require all businesses that handle more than a specified amount of hazardous materials or extremely hazardous materials, termed a reporting quantity, to submit a hazardous materials emergency/contingency plan (also known as a hazardous materials business plan) to their local Certified Unified Program Agency (CUPA). The responsible CUPA in San Bernardino County is the San Bernardino County Fire Protection District. These requirements would ensure that all potentially hazardous materials are handled in an appropriate manner and would minimize the potential for safety impacts. With mandatory regulatory compliance, the Project would not increase the potential for accident conditions which could result in the release of hazardous materials into the environment. Impacts would be less than significant.

c) Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant Impact. The Project Site is located approximately 0.25-mile south of the Rialto Middle School. An additional school campus, the Charlotte N. Werner Elementary School, abuts the Rialto Middle School but is located more than 0.25-mile from the Project Site.

As described above under Responses 4.9(a) and 4.9(b), the use of and transport of hazardous substances or materials to-and-from the Project Site during construction and long-term operational activities would be required to comply with applicable federal, State, and local regulations that would preclude substantial public safety hazards. Accordingly, there would be no potential for existing or proposed schools to be exposed to substantial safety hazards associated with emission, handling of, or the routine transport of hazardous substances or materials to-and-from the Project Site and impacts would be less than significant.

d) Would the Project be located on a site which is included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. Government Code Section 65962.5 requires DTSC, the State Department of Health Services, State Water Resources Control Board, and the State Department of Resources Recycling and Recovery to maintain a list of hazardous materials sites that fall within specific, defined categories. The Project Site is not listed on any of the hazardous materials databases compiled pursuant to Government Code Section 65962.5 (Roux, 2021, pp. 8-9). Accordingly, no impact would occur.

e) For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The Project Site is not within an airport land use plan area or within two miles of a public use airport. The nearest public-use airport is the San Bernardino International Airport, approximately 8.38 miles east of the Project Site. Therefore, the proposed project would not result in a safety or noise hazard for people working at the Project Site.

f) Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. The City of Rialto has an adopted California Standardized Emergency Management System (SEMS) and National Incident Management System (NIMS) Multi-hazard Function Plan (MHFP) which is coordinated by the City of Rialto "Disaster Council." This program is coordinated with the City Manager's Office, Police Department, Fire Department, City Clerk's Office, Administrative Services Organization, and Public Works Department. The redevelopment of the Project Site is not anticipated to impair implementation of or physically interfere with the City's emergency response plan. In the event of a disaster, actual evacuation route movement is conducted by the Rialto law enforcement agencies, and the Project Site would like foreseeably serve an emergency evacuation route or emergency operation center. During Project construction there would be no road closures of Cedar Avenue and/or Durst Drive, and if any temporary lane closures are necessary in the travel lane directly abutting the Project Site, such intermittent closures would require the construction contractor to implement a traffic control plan that complies with the *California Manual on Uniform Traffic Control Devices* and which must be approved by the City of Rialto to ensure that emergency response is not adversely affected.

Additionally, the Project's construction plans are required to be designed in accordance with applicable fire codes established by the Rialto Fire Department. Therefore, the Project is not anticipated to affect emergency access. The Project would be required to go through the City's development review and permitting process and would be required to incorporate all applicable design and safety standards and regulations in the California Fire Code and the City of Rialto Municipal Code Chapter 15.28, *Fire Code*. The incorporation of applicable design and safety standards and regulations would ensure that the Project's development does not interfere with the provision of local emergency services.

Based on the foregoing, the implementation of the Project would not significantly impair the implementation of or physically interfere with the City's Emergency Response Plan, the General Plan Public Safety Element, or any other emergency response plans. A less-than-significant impact would occur.

g) Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. The Project Site is fully developed and within a completely urbanized area of the City of Rialto that is void of any wildland areas. Additionally, according to the California Department of Forestry and Fire Protection (CalFire), the Project Site is not within a fire hazard severity zone (FHSZ) (Rialto, 2010, Exhibit 5.3; CalFire, 2020; Google Earth, 2021). Therefore, the Project would not expose people or structure to a significant risk involving wildland fires. No impact would occur.

4.10 Hydrology and Water Quality

Environmental Issue Areas Examined		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
a)	***Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?***	☐	☐	☑	☐
b)	***Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?***	☐	☐	☐	☑
c)	***Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:***				
i.	***Result in substantial erosion or siltation on- or off-site;***	☐	☐	☑	☐
ii.	***Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;***	☐	☐	☐	☑
iii.	***Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or***	☐	☐	☑	☐
iv.	***impede or redirect flood flows?***	☐	☐	☐	☑
d)	***In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?***	☐	☐	☐	☑
e)	***Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?***	☐	☐	☑	☐

The analysis in this section incorporates information from the *Preliminary Water Quality Management Plan for Rialto Commerce Center* report (WQMP) prepared by WestLAND Group, Inc. dated June 1, 2021, which is provided in its entirety as Appendix H of the IS/MND (WestLAND, 2021).

a) Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than Significant Impact. As demonstrated in the analysis below, the Project would not violate any water quality standards or waste discharge requirements.

As part of Section 402 of the Clean Water Act, the U.S. Environmental Protection Agency (EPA) has established regulations under the NPDES program to control direct storm water discharges. In California,

the State Water Resources Control Board (SWRCB) administers the NPDES permitting program and is responsible for developing NPDES permitting requirements. The NPDES program regulates industrial pollutant discharges, which include construction activities. The SWRCB works in coordination with the Regional Water Quality Control Boards (RWQCB) to preserve, protect, enhance, and restore water quality. The City of Rialto, including the Project Site, is within the jurisdiction of the Santa Ana RWQCB.

The Project has the potential to result in water quality impacts during short-term construction activities. The grading/excavation required for Project implementation would temporarily result in exposed soils that may be subject to wind and water erosion. Although erosion occurs naturally in the environment, improperly managed construction activities can lead to substantially accelerated rates of erosion that are considered detrimental to the environment. As such, short-term water quality impacts have the potential to occur during construction of the Project in the absence of any protective or avoidance measures. Pursuant to the requirements of the Santa Ana RWQCB and the City Rialto (Municipal Code Chapter 12.60 et seq.), the Project Applicant would be required to obtain coverage under the State's General Construction Storm Water Permit (NPDES Permit). The NPDES Permit is required for all projects that include construction activities, such as clearing, soil stockpiling, grading, and/or excavation that disturb at least one (1) acre of total land area, as is the case with the proposed Project. In addition, the Project Applicant would be required to comply with the Santa Ana RWQCB's *Santa Ana River Basin Water Quality Control Program*. Compliance with the NPDES Permit and the *Santa Ana River Basin Water Quality Control Program* involves the preparation and implementation of a SWPPP for construction-related activities, including grading. The SWPPP will specify the BMPs that the Project Applicant would be required to implement during construction activities to ensure that all potential pollutants of concern are prevented, minimized, and/or otherwise appropriately treated prior to being discharged from the subject property. Examples of BMPs that may be utilized during construction include, but are not limited to, sandbag barriers, geotextiles, storm drain inlet protection, sediment traps, rip rap soil stabilizers, and hydro-seeding. Mandatory compliance with the SWPPP would ensure that the Project's construction does not violate any water quality standards or waste discharge requirements.

Stormwater pollutants that may be produced during Project operation include pathogens (bacteria/virus), metals, oil and grease, and trash/debris (all from pavement runoff) and, phosphorus, nitrogen, sediment, metals, oil and grease, trash/debris, pesticides/herbicides, and organic compounds (all from landscaping on-site) (WestLAND, 2021; p. 2-3). The Project Applicant would be required to implement a WQMP to demonstrate compliance with the City's NPDES municipal stormwater permit, and to minimize the release of potential waterborne pollutants, including pollutants of concern for downstream receiving waters. The WQMP is a site-specific post-construction water quality management program designed to address the pollutants of concern of a development project via BMPs, implementation of which ensures the on-going protection of the watershed basin. The Project's preliminary WQMP is included as Technical Appendix H to this EIR. As identified in the preliminary WQMP, the Project is designed to include structural source control BMPs (including a hydrodynamic separator, catch basin inserts, and underground infiltration chambers beneath the truck yard) as well as operational source control BMPs (including, but not limited to, the installation of water-efficient landscape irrigation systems, storm drain system stenciling and signage, and implementation of a trash and waste storage areas) to minimize, prevent, and/or otherwise appropriately treat stormwater runoff flows for pollutants of concern before they are discharged into the municipal storm drain system. Technical details of the proposed BMPs are provided in the Project's preliminary WMQP. Compliance with the preliminary WQMP would be required as a condition of Project approval pursuant to Rialto Municipal Code Section 12.60.260, and long-term maintenance of on-site BMPs would be required to ensure their long-term effectiveness.

Additionally, the NPDES program requires certain land uses, including the industrial land uses proposed by the Project, to prepare a SWPPP for operational activities and to implement a long-term water quality sampling and monitoring program, unless an exemption has been granted. On April 1, 2014, the California State Water Resources Control Board adopted an updated new NPDES permit for storm water discharge associated with industrial activities (referred to as the "Industrial General Permit"). The new Industrial General Permit, which is more stringent than the former Industrial General Permit, became effective on July 1, 2015. Under this currently effective Industrial General Permit, the Project Applicant would be required to prepare a SWPPP for operational activities and implement a long-term water quality sampling and monitoring program or receive an exemption. Because the permit is dependent upon a detailed accounting of all operational activities and procedures, and the Project's building users and their operational characteristics are not known at this time, details of the operational SWPPP (including BMPs) or potential exemption to the SWPPP operational activities requirement cannot be determined with certainty at this time. However, based on the performance requirements of the Industrial General Permit, the Project's mandatory compliance with all applicable water quality regulations would further reduce potential water quality impacts during long-term operation.

Based on the foregoing analysis, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during construction or long-term operation. Impacts would be less than significant.

b) Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

No Impact. The Project Site is currently developed and contains minimal areas of pervious ground surface that would contribute to groundwater supplies and/or recharge, with exception to areas of the Project Site that currently contain landscaping. The Project would not result in a substantial change to the ground surface conditions of the Project Site and would in turn have little effect on ground water supplies or recharge. Accordingly, no impact would occur to ground water supplies and/or recharge.

c) Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

- ***i) result in substantial erosion or siltation on- or off-site;***
- ***ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site;***
- ***iii) create or contribute runoff water which would exceed the capacity or existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or***
- ***iv) impede or redirect flood flows?***

Less than Significant Impact (i and iii) and No Impact (ii and iv). Under existing conditions, the Project Site is entirely developed and does not contain a stream or river; therefore, the Project does not have the potential to alter the course of a stream or river. No impacts would occur in this regard.

As previously addressed under Response 4.7(b), the Project has been designed to minimize erosion and the Project Applicant would be required to implement a SWPPP during construction and a WQMP during

operation to ensure substantial erosion does not occur. Impacts related to erosion or siltation would be less than significant.

Additionally, the Project's storm drain system is designed to reduce the peak stormwater runoff flow rate and discharge volume to below existing conditions. Accordingly, implementation of the Project would not substantially increase the rate or amount of surface water runoff discharged from the site in a manner that would result in flooding on- or off-site or that would exceed the capacity of the existing stormwater drainage system servicing the Project Site. Impacts would be less than significant.

Lastly, according to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map No. 06071C8657H, the Project Site is located within an area of "minimal flood hazard" and is not located within a 100-year floodplain (FEMA, 2008). Accordingly, development on the Project Site would have no potential to place housing, or other structures, within a 100-year floodplain or impede or redirect flood flows within a 100- year floodplain. No impact would occur.

d) Would the Project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact. The Project Site is not within a 100-year flood hazard zone. Therefore, the Project does not have the potential to release pollutants due to 100-year flood inundation (FEMA, 2008). A tsunami is a sea wave, commonly referred to as a tidal wave, produced by a significant undersea disturbance such as tectonic displacement of a seafloor associated with large, shallow earthquakes. A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank. The Project Site is located approximately 45 miles northeast of the Pacific Ocean. Due to site distance, the Project would not be subject to tsunami-related inundation. Additionally, there are no enclosed or semi-enclosed bodies of water in proximity to the Project Site. Due to site distance, the Project would not be subject to seiche related inundation. No impacts would occur.

e) Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than Significant Impact. As previously discussed under Response 4.10(a), the Project Site is located within the Santa Ana River Basin and Project-related construction and operational activities would be required to comply with the Santa Ana RWQCB's *Santa Ana River Basin Water Quality Control Plan* by preparing and adhering to a SWPPP and WQMP. Implementation of the Project would not conflict with or obstruct the *Santa Ana River Basin Water Quality Control Plan* and impacts would be less than significant.

The Project Site is located within the Chino Groundwater Basin. Adjudicated basins, like the Chino Groundwater Basin are exempt from the 2014 Sustainable Groundwater Management Act (SGMA) because such basins already operate under a court-ordered water management plan to ensure their long-term sustainability. No component of the Project would obstruct with or prevent implementation of the management plan for the Chino Groundwater Basin. As such, the Project's construction and operation would not conflict with any sustainable groundwater management plan. Impacts would be less than significant.

4.11 Land Use and Planning

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) Physically divide an established community?	☐	☐	☐	☑
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☑

a) Would the Project physically divide an established community?

No Impact. As shown on Figure 2-6 the Project Site is developed with one single-story building and an outdoor paved storage area, completely surrounded by roadways and other developed properties. Also refer to the photographs presented on Figures 2-8 through 2-10; as shown, the surrounding properties are developed with industrial and commercial uses. Due to the extent of existing urbanization and that fact that that the Project Site is already developed, re-development of the site with a warehouse, parking area, and landscaping located entirely within Project Site would have no potential to divide an established community. No impact would occur.

b) Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The local land use policies and regulations applicable to Project adopted for the purpose of avoiding or mitigating environmental effects are the City of Rialto's General Plan and Municipal Code. The Project is consistent with the property's Light Industrial (LI) General Plan designation and would not conflict with any applicable policies from the General Plan. In addition, the Project would not conflict with any of the requirements imposed by the City's Municipal Code for the General Manufacturing (M-2) as stipulated in Chapter 18.42, *M-2 General Manufacturing Zone*. As such, no impacts associated with potential conflicts with plans, policies, and regulations adopted for the purpose of avoiding or mitigating environmental effects would occur.

4.12 Mineral Resources

Environmental Issue Areas Examined		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
a)	***Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?***	☐	☐	☑	☐
b)	***Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?***	☐	☐	☑	☐

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

Less than Significant Impact: The majority of the Project Site is located within Mineral Resource Zone 3 (MRZ 3), which is a designation placed upon areas where the significance of mineral deposits is unknown (Rialto, 2010, Exhibit 2.7). The northern portion of the Project Site is located within Mineral Resource Zone 2 (MRZ 2), which is a designation placed upon areas where mineral resources are likely present (ibid). The MRZ-2 classification is applied to a portion of the Project Site due to the likely presence of Plain Cement Concrete (PCC)-grade aggregate resources. Despite the potential presence of PCC-grade aggregate resources on a small portion of the Project Site, the potential deposits on and abutting the Project Site are not classified as a regionally-significant deposit (Rialto, 2010, Exhibit 2.6). Thus, implementation of the proposed Project would not result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State of California. Accordingly, a less-than-significant impact would occur.

4.13 Noise

Environmental Issue Areas Examined		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project result in:					
a)	***Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?***	☐	☐	☑	☐
b)	***Generation of excessive groundborne vibration or groundborne noise levels?***	☐	☐	☑	☐
c)	***For a project located within the vicinity of a private airstrip or an airport land use land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?***	☐	☐	☑	☐

The *Durst Drive Warehouse Noise Impact Analysis* (Noise Study) dated January 18, 2022 was prepared by Urban Crossroads, Inc. (Urban Crossroads) to calculate short-term construction noise and long-term operational noise levels with the Project and to identify potential impacts (Urban Crossroads, 2022e). This report is included as Technical Appendix I of the IS/MND and its findings are incorporated in the analysis presented herein.

a) Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies

Less than Significant Impact. The analysis presented on the following pages summarizes the Project's potential construction noise levels and operational noise levels. The detailed noise calculations for the analysis presented here are provided in Appendices 7.1 through 10.2 of the Project's Noise Study (see Technical Appendix I).

Construction Noise Impact Analysis

The Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual recognizes that construction projects are accomplished in several different stages and outlines the procedures for assessing noise impacts during construction. Each stage has a specific equipment mix, depending on the work to be completed during that stage. As a result of the equipment mix, each stage has its own noise characteristics; some stages have higher continuous noise levels than others, and some have higher impact noise levels than others. The Project construction activities are expected to occur in the following stages: 1) demolition; 2) site preparation; 3) grading; 4) building construction; 5) paving; and 6) application of architectural coatings. Project construction noise levels at representative sensitive receptor locations near the Project Site are summarized in Table 4-1, *Project Construction Noise Level Summary*.

Table 4-1 Project Construction Noise Level Summary

Receiver Location[1]	Construction Noise Levels (dBA Leq)						
	Demolition	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels[2]
R1	48.2	45.2	48.2	46.2	48.2	42.2	48.2
R2	47.0	44.0	47.0	45.0	47.0	41.0	47.0
R3	52.5	49.5	52.5	50.5	52.5	46.5	52.5
R4	48.3	45.3	48.3	46.3	48.3	42.3	48.3
R5	51.5	48.5	51.5	49.5	51.5	45.5	51.5

[1]Noise receiver locations are shown on Figure 6-7 of the Project's Noise Study.

[2]Construction noise level calculations based on distance from the Project Site boundaries (construction activity area) to nearby receiver locations. CadnaA construction noise model inputs are included in Appendix 10.1 of the Project's Noise Study.

Source: (Urban Crossroads, 2022e, Table 10-2)

To evaluate whether the Project would generate potentially significant short-term noise levels at nearest receiver locations, a construction-related daytime noise level threshold of 80 dBA L_{eq} is used as a reasonable threshold to assess the daytime construction noise level impacts, based on standards issued by the FTA (Urban Crossroads, 2022e, p. 22). The construction noise analysis presented in Table 4-1 shows that the nearest receiver locations will not be exposed to daytime noise levels that exceed 80 dBA L_{eq} during Project construction. Therefore, the noise impacts due to Project's daytime construction noise are considered less than significant at all receiver locations.

There is the potential during the Project's construction phase that pouring concrete within the building footprint (for the building foundation and/or wall panels) could occur during nighttime hours. Noise levels during potential nighttime concrete pouring activities are presented in Table 4-2.

Table 4-2 Nighttime Concrete Pouring Noise Level Summary

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})		
	Paving Construction[2]	Nighttime Threshold[3]	Threshold Exceeded?[4]
R1	48.2	70	No
R2	46.8	70	No
R3	52.5	70	No
R4	48.5	70	No
R5	51.7	70	No

[1] Noise receiver locations are shown on Exhibit 10-B from the Project's Noise Study.

[2] Paving construction noise level calculations based on distance from the construction noise source activity to nearby receiver locations.

[3] Exterior noise level standards as shown on Table 4-1 from the Project's Noise Study.

[4] Do the estimated Project construction noise levels exceed the nighttime construction noise level threshold?

Source: (Urban Crossroads, 2022e, Table 10-6)

To evaluate whether the Project would generate potentially significant short-term noise levels at nearest receiver locations, a construction-related nighttime noise level threshold of 70 dBA L_{eq} is used as a reasonable threshold to assess the potential nighttime concrete pouring impacts, based on standards issued by the FTA (Urban Crossroads, 2022e, p. 57). The construction noise analysis presented in Table 4-2 shows that the nearest receiver locations will not be exposed to nighttime noise levels that exceed 70

dBA L_{eq} during potential nighttime concrete pouring activities. Therefore, the noise impacts due to Project's nighttime construction noise are considered less than significant at all receiver locations.

Operational Noise Impact Analysis – Stationary Noise

Stationary (on-site) noise sources associated with long-term Project operation are expected to include loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements. To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project, as depicted on Table 4-3, *Reference Noise Level Measurements*.

Table 4-3 Reference Noise Level Measurements

Noise Source[1]	Noise Source Height (Feet)	Min./ Hour[2]		Reference Noise Level (dBA Leq) @50 Feet	Sound Power Level (dBA)[3]
		Day	Night		
Loading Dock Activity	8'	60	60	65.7	111.5
Roof-Top Air Conditioning Units	5'	39	28	57.2	88.9
Trash Enclosure Activity	5'	10	10	57.3	89.0
Parking Lot Vehicle Movements	5'	60	60	56.1	87.8
Truck Movements	8'	60	60	58.0	93.2

[1] As measured by Urban Crossroads, Inc.
[2] Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project Site. "Daytime" = 7:00 a.m. – 10:00 p.m.; "Nighttime" = 10:00 p.m. – 7:00 a.m.
[3] Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calculated using the CadnaA noise model at the reference distance to the noise source.
Source: (Urban Crossroads, 2022e, Table 9-1)

Using the reference noise levels to represent the proposed Project operations, Urban Crossroads, Inc. calculated the operational source noise levels that would occur at the modeled sensitive receptor locations near the Project Site. These noise levels are summarized in Table 4-4, *Project Operations Noise Level Summary*. It is important to note that the projected noise levels assume the worst-case noise environment with the loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements all operating/occurring at the same time. These sources of noise activity will likely vary throughout the day. The daytime hourly noise levels at the off-site receiver locations are expected to range from 32.1 to 45.3 dBA L_{eq}, which would correspond to an increase above existing ambient noise levels of between 0.0 and 0.2 dBA L_{eq} at these receiver locations (Urban Crossroads, 2022e, p. 49). The nighttime hourly noise levels at the off-site receiver locations are expected to range from 31.0 to 44.3 dBA L_{eq}, which would correspond to an increase above existing ambient noise levels of between 0.0 and 0.4 dBA L_{eq} at these receiver locations (Urban Crossroads, 2022e, p. 50). Neither the daytime nor nighttime Project noise levels would exceed the applicable thresholds of significance (Urban Crossroads, 2022e, pp. 47-48). Project operational noise levels would be less than significant.

Table 4-4 Project Operations Noise Level Summary

Receiver Location[1]	Noise Level at Receiver Locations (dBA Leq)		Thresholds at Receiving Land Use (dBA Leq)		Threshold Exceeded?[2]	
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
R1	45.1	44.1	55	45	No	No
R2	45.3	44.3	55	45	No	No
R3	43.5	42.5	55	45	No	No
R4	32.1	31.0	55	45	No	No
R5	37.2	36.2	55	45	No	No

[1] See Exhibit 8-A of the Project's Noise Study for receiver locations.
[2] Do the estimated Project operational noise source activates exceed the noise level standards?
Source: (Urban Crossroads, 2022e, Table 9-2)

Operational Noise Impact Analysis – Traffic Noise

To evaluate permanent, off-Site noise increases that could result from Project-related traffic, noise levels were modeled for the following traffic scenarios:

- Opening Year: This scenario refers to the existing traffic noise conditions with expected ambient growth added to reflect projected roadway noise conditions at the time the Project becomes operational in the year 2023.
- Opening Year plus Cumulative: This scenario evaluates the Opening Year traffic conditions with the addition of reasonably foreseeable cumulative development projects in the vicinity of the Project Site.

Traffic noise contours and noise levels were established based on existing and projected future traffic conditions on off-site roadway segments within the Project's study area, and do not take into account the effect of any existing noise barriers or topography that may affect ambient noise levels. Refer to the Project's Noise Study (see Technical Appendix I) for a detailed description of the methodology used to evaluate the Project's traffic-related noise effects.

Table 4-5 presents a comparison of existing noise levels (with ambient growth) along Project study area roadway segments and the noise levels that result with addition of Project traffic. Under this Opening Year scenario, the Project would result in a noise increase of between 0.2 to 1.5 dBA to adjacent roadway segments, which would not exceed the applicable significance thresholds. Therefore, the Project's contribution to off-Site traffic noise would not result in a substantial permanent increase in ambient noise levels under Opening Year traffic conditions and Project-related impacts would be less than significant.

Table 4-6 summarized Opening Year plus Cumulative noise conditions, both with and without Project traffic. Under this scenario, the Project would result in a noise increase of between 0.0 to 0.6 dBA to adjacent roadway segments, which would not exceed the applicable significance thresholds. Therefore, the Project's contribution to off-Site traffic noise would not result in a substantial permanent increase in ambient noise levels under Opening Year plus Cumulative traffic conditions and Project-related impacts would be less than significant.

Table 4-5 Opening Year Traffic Noise Level Summary

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[1]			Incremental Noise Level Increase Threshold[2]	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Cedar Av.	n/o Dwy. 1	Non-Sensitive	70.4	70.7	0.3	3.0	No
2	Cedar Av.	n/o Merrill Av.	Non-Sensitive	70.3	70.5	0.2	3.0	No
3	Cedar Av.	s/o Merrill Av.	Sensitive	69.7	70.0	0.3	1.5	No
4	Cedar Av.	s/o I-10 EB	Non-Sensitive	70.8	71.0	0.2	3.0	No
5	Merrill Av.	w/o Cedar Av.	Sensitive	69.1	69.6	0.5	1.5	No
6	Merrill Av.	e/o Cedar Av.	Sensitive	69.1	70.6	1.5	1.5	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (refer Table 4-1 of the Project's Noise Study)?
Source: (Urban Crossroads, 2022e, Table 7-8)

Table 4-6 Opening Year plus Cumulative Noise Level Summary

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[1]			Incremental Noise Level Increase Threshold[2]	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Cedar Av.	n/o Dwy. 1	Non-Sensitive	70.8	70.9	0.1	3.0	No
2	Cedar Av.	n/o Merrill Av.	Non-Sensitive	70.7	70.7	0.0	3.0	No
3	Cedar Av.	s/o Merrill Av.	Sensitive	70.4	70.5	0.1	1.5	No
4	Cedar Av.	s/o I-10 EB	Non-Sensitive	73.2	73.8	0.6	3.0	No
5	Merrill Av.	w/o Cedar Av.	Sensitive	69.4	69.4	0.0	1.5	No
6	Merrill Av.	e/o Cedar Av.	Sensitive	69.4	69.4	0.0	1.5	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (refer Table 4-1 of the Project's Noise Study)?
Source: (Urban Crossroads, 2022e, Table 7-9)

b) Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant Impact.

Construction Analysis

Construction activities on the Project Site would utilize construction equipment that has the potential to generate vibration. Table 4-12, *Project Construction Vibration Levels*, summarizes Project construction vibration levels at the modeled receiver locations. As shown, all receiver locations in the vicinity of the Project Site would be exposed to vibration levels that fall below the City of Rialto's significance threshold

(i.e., 0.2 in/sec peak particle velocity [PPV]) (Urban Crossroads, 2022e, pp. 21-22). Accordingly, Project construction would not generate temporary, excessive groundborne vibration or noise levels and a less-than-significant impact would occur.

Table 4-7 Project Construction Vibration Levels

Receiver[1]	Distance to Const. Activity (Feet)[2]	Typical Construction Vibration Levels PPV (in/sec)[3]					Thresholds PPV (in/sec)[4]	Thresholds Exceeded?[5]
		Small bulldozer	Jackhammer	Loaded Trucks	Large bulldozer	Highest Vibration Level		
R1	1,445'	0.000	0.000	0.000	0.000	0.000	0.2	No
R2	1,566'	0.000	0.000	0.000	0.000	0.000	0.2	No
R3	802'	0.000	0.000	0.000	0.000	0.000	0.2	No
R4	842'	0.000	0.000	0.000	0.000	0.000	0.2	No
R5	1,420'	0.000	0.000	0.000	0.000	0.000	0.2	No

[1] Receiver locations are shown on Exhibit 10-A of the Project's Noise Study.
[2] Distance from receiver location to Project construction boundary (Project Site boundary).
[3] Based on the Vibration Source Levels of Construction Equipment (refer to Table 10-4 of the Project's Noise Study).
[4] County of San Bernardino Development Code, Section 83.01.090(a) (see Appendix 3.1 of the Project's Noise Study)
[5] Does the peak vibration exceed the acceptable vibration thresholds?
"PPV" = Peak Particle Velocity
Source: (Urban Crossroads, 2022e, Table 10-5)

Operational Analysis

Under long-term conditions, expected operational activities at the Project Site would not include or require equipment, facilities, or activities that would result in perceptible ground-borne vibration. Trucks would travel to and from the Project Site on surrounding roadways; however, vibration and groundborne noise levels for heavy trucks operating at the posted speed limits on smooth, paved surfaces – as is expected on the Project Site and surrounding roadways is minimal. Accordingly, Project operation would not generate excessive groundborne vibration or groundborne noise levels and impacts would be less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Less than Significant Impact. The Project Site is not located within two miles of a public airport or within an airport land use plan. The closest airport is the San Bernardino International Airport located roughly 7.7 miles east of the Project Site. As such, the Project Site would not be exposed to excessive noise levels from airport operations, and therefore, impacts are considered less than significant. (Urban Crossroads, 2022e, p. 22)

4.14 Population and Housing

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☑	☐
b) Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑

a) Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less than Significant Impact: The Project Applicant would develop the Project Site with employment-generating land uses. The Project Site is a property that is planned for employment-generating land uses by the Rialto General Plan and is located in an area of Rialto that is already developed with employment-generating land uses. Accordingly, development of the Project would sustain the ongoing trend of the development of employment land uses in the Project area (and the larger City of Rialto) and would not generate job growth that substantially exceeds what was already anticipated by the City in their General Plan or by the Southern California Association of Governments' (SCAG) 2040 employment projections for the City of Rialto (which are based on the assumption of buildout of the General Plan). Additionally, the Project Site is located in an area of Rialto that is served by existing roadways and public utility infrastructure and the Project would not require the extension or expansion of any infrastructure beyond what is needed to service the Project. Accordingly, implementation of the Project would not induce direct or indirect substantial unplanned growth in the area and impacts would be less than significant.

b) Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact: The Project Site does not contain any housing and there are no people living at the Project Site that would be displaced by the Project. No impact associated with population or housing displacement would occur.

4.15 Public Services

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☑	☐
Police protection?	☐	☐	☑	☐
Schools?	☐	☐	☑	☐
Other public facilities?	☐	☐	☐	☑

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: a) Fire protection; b) Police protection; c) Schools; or d) Other public facilities?

Fire Service:

Less than Significant Impact. Fire prevention services are provided by the Rialto Fire Department (RFD). The department provides 24-hour emergency response to a wide variety of critical situations, including fires, explosions, hazardous materials incidents, medical emergencies, accidents, and miscellaneous public assistance requests. There are five stations servicing the City of Rialto: Station 201 (131 South Willow Avenue); Station 202 (1700 North Riverside Avenue); Station 203 (1550 North Ayala Drive); Station 204 (3288 Alder Avenue); and Station 205 (1485 South Willow Avenue). The closest fire stations to the Project Site are the RFD Station 201 (1.24 miles northeast) and RFD Station 205 (1.86 miles southwest). Based on the Project Site's proximity to Stations 201 and 205, these stations will be able to adequately meet the Project's demand for fire protection services and implementation of the Project would not result in the need for new, expanded, or unplanned facilities would be required.

The Project is required to comply with the provisions of the City's Development Impact Fee (DIF) Ordinance (Rialto Municipal Code Chapter 3.33), which requires a fee payment that the City applies to the funding of fire protection facilities. The City will collect DIF from the Project Applicant at the time of building permit issuance (based on building square footage). The Project's payment of DIF, as well as increased tax revenues that would result from development of the Project, would be used by the City to help pay for fire protection services and other public services.

The Project would incorporate fire prevention and fire suppression design features to minimize the potential demand placed on the RFD. The proposed warehouse distribution building would be of concrete tilt-up construction. Concrete is non-flammable and concrete tilt-up buildings have a lower fire hazard risk than wood-frame construction. The Project also would install fire hydrants on-site and would provide paved primary and secondary emergency access to the Project Site to support the RFD in the event fire suppression activities are needed on-site. Lastly, the proposed warehouse distribution building would be equipped with fire sprinklers in accordance with the California and Rialto building codes. Based on its size and scale, the proposed building would likely feature Early Suppression, Fast Response (ESFR) ceiling mounted fire sprinklers (or a comparable fire suppression system) that exceed the fire protection of

traditional sprinkler systems. ESFR high output, high volume systems are located in ceiling spaces as with conventional fire sprinkler systems, but they incorporate large, high-volume, high-pressure heads to provide the necessary fire protection for industrial buildings that may contain high-piled storage. While most other sprinklers are intended to control the growth of a fire, an ESFR sprinkler system is designed to suppress a fire. To suppress a fire does not necessarily mean it will extinguish the fire but rather it is meant to "knock" the fire back down to its source.

Based on the foregoing, the Project incorporates several design features to minimize fire hazards. Additionally, the Project would receive adequate fire protection service and would not result in the need for new or physically altered fire protection facilities and the Project Applicant would pay DIF and the Project would generate other revenues (e.g., tax) that would help offset the Project's demand for fire protection services. Impacts to fire protection facilities would be less than significant.

Police Protection:
Less than Significant Impact. Police protection services are provided by the Rialto Police Department (RPD). The RPD Station is located at 128 North Willow Avenue, approximately 1.24 miles northeast of the Project Site.

The Project would entail re-development of a property that has received RPD services since it was first developed over 20 years ago. Implementation of the Project would result in an incremental increase in demand for police protection services relative to existing uses on the Project Site, but the increase is not anticipated to be substantial and would not require or result in the construction of new or physically altered police facilities. The Project Applicant would be required to comply with the provisions of the City's DIF Ordinance (Municipal Code Chapter 3.33). This ordinance requires a fee payment that the City applies to the funding of public facilities, including police protection facilities. The City will collect the Project's DIF share from the Project Applicant at the time of building permit issuance (based on building square footage). The Project's payment of DIF, as well as increased tax revenues that would result from development of the Project, would be used by the City to help pay for police protection services and other public services. Based on the foregoing, the proposed Project would receive adequate police protection service, and would not result in the need for new or physically altered police protection facilities. Impacts to police protection facilities would therefore be less than significant.

Schools:
Less than Significant Impact. Implementation of the Project would not create a direct demand for public school services, as the Project Site would contain non-residential uses that would not generate any school-aged children requiring public education. The addition of employment-generating uses on the Project Site would assist the City in achieving its goal to provide a better jobs/housing balance within the City (allowing more City residents to work within the City rather than commute elsewhere). Thus, the Project is not expected to draw a substantial number of new residents to the region and would therefore not indirectly generate new school-aged students in the City requiring public education. Because the Project would not directly generate students and is not expected to indirectly draw students to the area, the Project would not cause or contribute to a need to construct new or physically altered public school facilities. Although the Project would not create a demand for additional public school services, the Project Applicant would be required to contribute development impact fees to the Rialto Unified School District in compliance with California Senate Bill 50 (Greene), which allows school districts to collect fees from new developments to offset the costs associated with increasing school capacity needs. Mandatory payment

of school fees would be required prior to the issuance of a building permit. With mandatory payment of fees in accordance with California Senate Bill 50, impacts to public schools would be less than significant.

Parks:

No Impact. The Project does not propose to construct any new on- or off-site recreation facilities. Additionally, the Project would not expand any existing off-site recreational facilities. In addition, the Project does not propose any type of residential use or other land use that may generate a population that would increase the use of existing neighborhood and regional parks or other recreational facilities. Accordingly, implementation of the Project would not result in environmental effects related to the construction or expansion of recreational facilities or the increased use or substantial physical deterioration of an existing neighborhood or regional park. No impact would occur.

Other Public Facilities:

No Impact. The Project is not expected to result in a demand for other public facilities/services, including libraries, post offices, public health facilities, and/or animal shelters. As such, implementation of the Project would not adversely affect other public facilities or require the construction of new or modified public facilities. No impact would occur.

4.16 Recreation

Environmental Issue Areas Examined		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
a)	***Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?***	☐	☐	☐	☑
b)	***Does the project include recreational facilities or require the construction of or expansion of recreational facilities which might have an adverse physical effect on the environment?***	☐	☐	☐	☑

a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact: The Project does not propose any type of residential use or other land use that may generate a population that would increase the use of existing neighborhood and regional parks or other recreational facilities. Accordingly, implementation of the proposed Project would not result in the increased use or substantial physical deterioration of an existing neighborhood or regional park. No impact would occur.

b) Does the Project include recreational facilities or require the construction of or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The Project does not include the construction of any new on- or off-site recreation facilities. The Project would not expand any existing off-site recreational facilities. Therefore, environmental effects related to the construction or expansion of recreational facilities would not occur with implementation of the proposed Project. No impact would occur.

4.17 Transportation

Environmental Issue Areas Examined		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
a)	***Conflict with an applicable program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?***	☐	☐	☑	☐
b)	***Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?***	☐	☐	☑	☐
c)	***Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?***	☐	☐	☑	☐
d)	***Result in inadequate emergency access?***	☐	☐	☑	☐

The California Natural Resources Agency adopted changes to the CEQA Guidelines in December 2018 that require vehicle miles traveled (VMT) to be used as the metric to evaluate a project's transportation impacts as of July 1, 2020. Pursuant to CEQA Guidelines Section 15064.3(a), automobile delay, as measured by level of service (LOS) and other similar metrics, no longer constitute a significant environmental effect under CEQA. Lead agencies in California are required to use VMT to evaluate project-related transportation impacts. Notwithstanding, the City's General Plan and traffic study guidelines require an analysis based on LOS to confirm a development project's consistency with the General Plan and, in part, to determine its transportation improvement obligations. Accordingly, although Response 4.17(a), below, discloses the Project's potential effects to LOS, this information is only intended to demonstrate compliance (or potential conflicts) with the LOS standards identified by the City of Rialto General Plan and, in the event an LOS deficiency is identified, the Project's effect on automobile delay does not constitute a significant environmental impact.

The *Durst Drive Warehouse Traffic Analysis* (Traffic Analysis), which includes the LOS analysis required by the City of Rialto General Plan as well as the vehicle miles traveled (VMT) analysis required by CEQA, was prepared for the Project by Urban Crossroads. The report is dated March 17, 2022 (Urban Crossroads, 2022f) and is included as Technical Appendix J to the IS/MND. The findings of the Traffic Analysis are incorporated into the analysis presented herein.

a) Would the project conflict with an applicable program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less than Significant Impact. As noted above, the CEQA Guidelines have been updated to require an analysis of a project's potential to conflict with plans, programs, ordinances, or policies that address the circulation system, including transit, roadway, bicycle, and pedestrian facilities. A project that generally conforms with, and does not obstruct, the development plans, programs, ordinances, and policies is generally considered to be consistent. The plans, policies, programs, ordinances, and standards that are relevant to the Project are identified in the analysis below.

SCAG Connect SoCal

The fundamental goals of SCAG's *Connect SoCal* are to make the SCAG region a better place to live, work, and play for all residents regardless of race, ethnicity, or income class. Due to the Project's consistency with the Rialto General Plan – which the SCAG uses as the foundation for its regional land use planning program – as well as the Project Site's geographic location in proximity to major local and regional truck routes, the Project would not conflict with the goals and policies of *Connect SoCal.* The Project is consistent with the Rialto General Plan and, therefore, would not conflict with the goals and policies – including the following goals related to vehicular and non-vehicular circulation.

- Increase mobility, accessibility, reliability, and travel safety for people and goods.
- Enhance the preservation, security, and resilience of the regional transportation system.
- Increase person and goods movement and travel choices within the transportation system.
- Adapt to a changing climate and support an integrated regional development pattern and transportation network.
- Leverage new transportation technologies and data-driven solutions that result in more efficient travel.

San Bernardino County Congestion Management Plan

The San Bernardino County Congestion Management Program (CMP) was prepared by the San Bernardino Associated Governments (since re-named as the San Bernardino County Transportation Authority). The intent of the CMP is to create a link between land use, transportation, and air quality planning decisions and to prompt reasonable growth management programs that would more effectively utilize new and existing transportation funds to alleviate traffic congestion and related impacts and improve air quality. There are no CMP facilities within the Project's study area; therefore, the Project would not result in traffic that would conflict with any CMP goal or policy (Urban Crossroads, 2022f, p. 6).

Rialto General Plan Circulation Chapter

The "Making the Connections: The Circulation Chapter" of the City's 2010 General Plan is intended to guide the development of the City's circulation system in a manner that is compatible with the land use vision. The Circulation Chapter provides policy direction to create a system of "complete streets," which refers to a multi-modal transportation network designed and operated to meet the needs of all users. Through the goals and policies of this Chapter, the City will strive to meet diverse mobility needs and reduce vehicle miles traveled, which will reduce greenhouse gas emissions, address climate change, and mitigate roadway congestion. The following analysis provides is a discussion of the Project's consistency with the applicable policies of the Circulation Chapter from the City of Rialto's General Plan.

Policy 4-1.20 – Design City streets so that signalized intersections operate at Level of Service (LOS) D or better during the morning and evening peak hours, and require new development to mitigate traffic impacts that degrade LOS below that level. The one exception will be Riverside Avenue south of the Metrolink tracks all the way to the City's southern border, which can operate at LOS E; and

Policy 4-1.21 – Design City streets so that unsignalized intersections operate with no vehicular movement having an average delay greater than 120 seconds during the morning and evening peak hours, and require new development to mitigate traffic impacts that increase delay above that level.

As previously noted, the CEQA Guidelines require that potential transportation-related impacts to the environment be determined based on VMT; a LOS metric is no longer used as the basis for determining the significance of environmental impacts. Therefore, the LOS analysis herein using LOS criteria focuses

solely on consistency with the City of Rialto's General Plan, specifically Policy 4-1.20 and Policy 4-1.21. Inconsistency with Policy 4-1.20 and Policy 4-1.21, however, does not constitute a transportation impact under CEQA, pursuant to CEQA Guidelines Section 15064.3(a) and the LOS analysis is provided for informational purposes.

The LOS analysis for the Project was prepared in accordance with the City of Rialto Public Works Department's *Traffic Impact Analysis Report Guidelines and Requirements* (TIA Guidelines). Using the trip generation rates required by the City's TIA Guidelines, the Project is calculated to generate 840 combined inbound and outbound vehicle trips per day, including 502 passenger car trips and 338 truck trips. When the Project's trucks trips are weighted to a "passenger car equivalent (PCE)" for purposes of analysis, the Project's combined inbound and outbound daily PCE trips are 1,406 with 122 PCE trips during the AM peak hour and 130 PCE trips during the PM peak hour. In accordance with the requirements of the City's TIA Guidelines, the Project's traffic was evaluated under the following two scenarios:

- Opening Year: This scenario refers to the existing traffic conditions with expected ambient growth added to reflect projected roadway noise conditions at the time the Project becomes operational in the year 2023.
- Opening Year plus Cumulative: This scenario evaluates the Opening Year traffic conditions with the addition of reasonably foreseeable cumulative development projects in the vicinity of the Project Site.

Refer to Section 4 of the Project's TIA (see Technical Appendix J) for a detailed description of the assumptions and methodologies used in the LOS analysis, including how the Project's traffic study area was determined, how the Project's traffic distribution patterns were determined and assigned to the roadway network, and how ambient growth and traffic from cumulative development projects were incorporated into the traffic model.

Under the Opening Year traffic scenario, all intersections in the Project study area would operate at levels consistent with Policy 4-1.20 and Policy 4-1.21, with the exception of the Cedar Avenue and Durst Drive intersection which would operate at LOS E during the PM peak hour (Urban Crossroads, 2022f, p. 53). As a condition of approval, the City of Rialto will require the Project Applicant to contribute fees toward the funding of a new traffic signal at the Cedar Avenue and Durst Drive intersection. Upon installation of the traffic signal, the Cedar Avenue and Durst Drive intersection would operate at acceptable LOS (LOS D or better) under the Opening Year traffic scenario (Urban Crossroads, 2022f, p. 53). Accordingly, the Project would not conflict with Policy 4-1.20 and Policy 4-1.21 under Opening Year traffic conditions.

Under the Opening Year plus Cumulative traffic scenario, all intersections in the Project study area would operate at levels consistent with Policy 4-1.20 and Policy 4-1.21, with the exception of the Cedar Avenue and Durst Drive intersection which would operate at LOS F in the PM peak hour (Urban Crossroads, 2022f, p. 57). As a condition of approval, the City of Rialto will require the Project Applicant to contribute fees toward the funding of a new traffic signal at the Cedar Avenue and Durst Drive intersection. Upon installation of the traffic signal, the Cedar Avenue and Durst Drive intersection would operate at acceptable LOS under the Opening Year plus Cumulative traffic scenario (Urban Crossroads, 2022f, p. 59). Accordingly, the Project would not conflict with Policy 4-1.20 and Policy 4-1.21 under Opening Year plus Cumulative traffic conditions.

It should be noted that the following three intersections also would operate at deficient LOS conditions (LOS E of F) under Opening Year plus Cumulative Traffic conditions (Urban Crossroads, 2022f, p. 57).

- Cedar Avenue and Valley Boulevard, which would operate at LOS E in the PM peak hour;
- Cedar Avenue and I-10 Westbound, which would operate at LOS F in the AM and PM peak hours; and
- Cedar Avenue and I-10 Eastbound, which would operate at LOS F in the AM and PM peak hours.

All three of the above-listed intersections are not located within the geographic limits of the City of Rialto; therefore, the deficient LOS conditions forecasted at these intersections under Opening Year plus Cumulative traffic conditions are immaterial to the Project's consistency with Policy 4-1.20 and Policy 4-1.21, which only apply to City of Rialto roadways. Notwithstanding, as a condition of approval, the City will require the Project Applicant to pay fair share fees to the County of San Bernardino and Caltrans (should a fair share funding program be created that the Project Applicant can contribute to) for the improvements listed below. The installation of these improvements by the County of San Bernardino and/or Caltrans, which is outside the jurisdictional authority of the City of Rialto, would allow these intersections to operate at acceptable LOS (LOS D or better) under Opening Year plus Cumulative traffic conditions (Urban Crossroads, 2022f, p. 59).

- Cedar Avenue and Valley Boulevard: 1) Re-stripe eastbound right turn lane as an eastbound through lane, 2) Re-stripe northbound right turn lane as northbound shared through lane;
- Cedar Avenue and I-10 Westbound: Add a northbound left turn lane; and
- Cedar Avenue and I-10 Eastbound: 1) Add a southbound left turn lane, 2) Add an eastbound right turn lane.

Based on the foregoing analysis, the Project would not conflict with Policy 4-1.20 and Policy 4-1.21 under any traffic analysis scenario.

Policy 4-2.1– Locate new development and their access points in such a way that traffic is not encouraged to utilize local residential streets for access to the development and its parking.

Access to the Project Site would be provided from Cedar Avenue and Durst Drive; neither of these streets are classified as local residential streets The Project would not conflict with Policy 4-2.1.

Policy 4-6.3 – Require major developments to include bus turnouts, bus shelters, and other transit facilities as appropriate.

Omnitrans provides public transit service within the City of Rialto. Omnitrans does not operate any routes along Cedar Avenue or Durst Drive; therefore, there is no need for the Project to provide bus turnouts, bus shelters, or other transit facilities along its public street frontages. The Project would not conflict with Policy 4-6.3.

Policy 4-8.5 – Require major developments to include bicycle storage facilities, including bicycle racks and lockers.

In accordance with the California Green Building Standards Code (CALGreen, Title 24, Part 11 of the California Code of Regulations), bicycle parking will be provided on the Project Site for use by employees and visitors to the Project Site. The Project would not conflict with General Plan Circulation Chapter Policy 4-8.5.

Policy 4-9.1 – Install sidewalks where they are missing, and make improvements to existing sidewalks for accessibility purposes. Priority should be given to needed sidewalk improvement near schools and activity centers. Provide wider sidewalks in areas with higher pedestrian volumes;

Policy 4-9.2 – Require sidewalks and parkways on all streets in new development;

Policy 4-9.3 – Provide pedestrian-friendly and safety improvements, such as crosswalks and pedestrian signals, in all pedestrian activity areas;

Policy 4-9.4 – Accommodate pedestrians and bicyclists — in addition to automobiles — when considering new development projects; and

Policy 4-9.6 – Encourage new development to provide pedestrian paths through projects, with outlets to adjacent collectors, secondaries, and arterial roadways.

The Project retains the existing sidewalk along the Project Site frontage with Cedar Avenue Avenue and provides a new sidewalk along the Project Site frontage with Durst Drive. The type of traffic generated by the Project (i.e., passenger cars and trucks) would be compatible with the type of existing traffic on roadways in the vicinity of the Project Site. In addition, all proposed improvements within the public right-of-way would be installed in conformance with City engineering and design standards. The City of Rialto Public Works Department reviewed the Project's proposal and determined that no on- or off-Site Project design feature would pose a hazard to pedestrians or bicyclists. The Project would not conflict with Policies 4-9.1, 4-9.2, 4-9.3, 4-9.4, or 4-9.6.

Policy 4-9.7 – Require ADA compliance on all new or modified handicap ramps.

The Project provides Americans with Disabilities Act (ADA)-compliant paths of travel on-site to and from the building from parking and loading areas. In addition, sidewalks and ramps along the Project Site frontage with Cedar Avenue and Durst Drive would meet minimum ADA requirements. The Project would not conflict with Policy 4-9.7.

Policy 4-10. 1 – Designate and enforce truck routes for use by commercial trucking as part of the project approval process.

Tractor-trailers would utilize Cedar Avenue to access the Project Site from the Interstate freeway system. Pursuant to General Plan Exhibit 4.5, Cedar Avenue is a City-designated truck route from its northern terminus to the southern City boundary. Thus, trucks traveling to and from the Project Site would utilize a travel route that is planned and designed for the use of such vehicles. The Project would not conflict with Policy 4-10.1.

Policy 4-10.4 – Encourage the development of adequate on-site loading areas to minimize interference of truck loading activities with efficient traffic circulation on adjacent roadways.

The Project provides a secured loading area interior to the Project Site with dock high doors and tractor-trailer parking spaces. The loading area is separated from the public right-of-way and loading/unloading activities that would occur in the loading area would not interfere with traffic circulation along Cedar Avenue or Durst Drive. The Project would not conflict with Policy 4-10.4.

Conclusion
As discussed in the preceding analysis, the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Impacts would be less than significant.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less than Significant Impact. Changes to CEQA Guidelines were adopted in December 2018 that require all lead agencies to adopt VMT as a replacement for automobile delay-based LOS as the new measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020. To aid in the transition from LOS to VMT, the Governor's Office of Planning and Research (OPR) published its *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Technical Advisory). Based on OPR's Technical Advisory, the County of San Bernardino adopted their *San Bernardino County Transportation Impact Study Guidelines* (County Guidelines). At the time this Initial Study was written, the City of Rialto was in the process of developing local VMT analysis guidelines and impact thresholds, therefore, for purposes of the Project's analysis the County Guidelines were utilized.

The Project's traffic was evaluated against screening criteria established in the County Guidelines to determine if it could be clearly determined that implementation of the Project would not generate substantial vehicles miles traveled (VMT) – and, therefore, be consistent with CEQA Guidelines Section 15064.3 – or if additional analysis would be required to fully evaluate the significance of Project-related VMT. One of the screening criteria in the County Guidelines is the "Low VMT Area" criteria, which identifies "efficient" geographic areas in the County where development would result in low VMT per person/employee and would be beneficial to the region. Based on a review of the regional transportation model (San Bernardino Transportation Analysis Model, SBTAM), the traffic analysis zone (TAZ) where the Project Site is located was found to meet the criteria of a low VMT area and the socio-economic data for the TAZ provide employment types that are consistent with the land use proposed by the Project. Accordingly, the Project meets "Low VMT Area" screening criteria and, thus, is clearly presumed to not cause or contribute to a substantial increase in the total citywide and/or regional VMT (Urban Crossroads, 2022f, pp. 64-65). The Project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b); impacts would be less than significant.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than Significant Impact. The types of traffic generated during operation of the Project (i.e., passenger cars and trucks) would be compatible with the type of traffic observed along study area roadways under existing conditions. In addition, all study area intersections feature adequate queuing capacity under Opening Year and Opening Year plus Cumulative traffic conditions – thus the Project would not cause or contribute to inadequate/unsafe vehicle stacking along any study area roadway (Urban Crossroads, 2022f, pp. 54, 58) All proposed improvements within the public right-of-way would be installed in conformance with City design standards. If any component of Project construction would occur in the public right-of-way and require the partial or full closure of a sidewalk and/or travel lane, all work would be required to adhere to the applicable construction control practices that are specified in the *State of California Department of Transportation Construction Manual*, dated January 2021 and published by Caltrans, to minimize potential safety hazards. The City reviewed the Project's application materials and determined that no hazardous transportation design features would be introduced within the City public right-of-way through implementation of the Project. Based on the foregoing information, the Project's construction

and operation would not create or substantially increase safety hazards due to a design feature or incompatible use. Impacts would be less than significant.

d) Would the Project result in inadequate emergency access?

Less than Significant Impact. The types of traffic generated during operation of the Project (i.e., passenger cars and trucks) would be compatible with the type of traffic observed along surrounding roadways under existing conditions. In addition, all proposed improvements within the public right-of-way would be installed in conformance with City design standards. The City of Rialto reviewed the Project's application materials and determined that no hazardous transportation design features would be introduced through implementation of the Project. Accordingly, the Project's construction and operation would not create or substantially increase safety hazards due to a design feature or incompatible use. No impact would occur.

4.18 Tribal Cultural Resources

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defines in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is				
a) Listed or eligible for listing in the California Register of Historical resources or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☐	☐	☐	☑
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying for the criteria set forth in (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☑	☐	☐

a) Listed or eligible for listing in the California Register of Historical resources or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

No Impact. There are no resources on the Project Site that are eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined by Public Resources Code Section 5020.1(k) (BFSA, 2021). Implementation of the Project would not result in a substantial adverse change in the significance of a listed historical resource. No impact would occur.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying for the criteria set forth in (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe

Less than Significant Impact with Mitigation. As part of the AB 52 consultation process required by State law, the City sent notification of the Project to Native American tribes with possible traditional or cultural affiliation to the Project area. The City consulted with each tribe that requested consultation and consultation was closed on May 12, 2022. During the course of the tribal consultation process, no Native American tribe provided the City with substantial evidence indicating that tribal cultural resources, as defined in Public Resources Code Section 21074, are present on the Project Site or have been found previously on the Project Site. Notwithstanding, due to the Project Site's location in an area where Native American tribes are known to have a cultural affiliation, there is the possibility that prehistoric archaeological resources, including tribal cultural resources, could be encountered during ground-disturbing construction activities – although this is considered unlikely due to the pervasive, historic and on-going disturbances that have occurred on the Project Site and could only occur in native, undisturbed soils approximately 2.5 to 5.5 feet below the ground surface. Were a tribal cultural resource, as defined

in Public Resources Code Section 21074, to be found on the Project Site during construction – and not protected – a significant impact would occur. Mitigation is required.

At the request of the Gabrieleño Band of Mission Indians – Kizh Nation, the following mitigation measures are required to ensure that the Project does not result in inadvertent, adverse effects to tribal cultural resources during construction. Implementation of the mitigation measures listed below would ensure the proper identification and subsequent treatment of any significant tribal cultural resources that may be encountered during ground-disturbing activities associated with Project development. With implementation of the required mitigation, the Project's potential impact to significant tribal cultural resources would be reduced to less-than-significant.

MM TCR-1 Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities

A. The project applicant/lead agency shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians – Kizh Nation. The monitor shall be retained prior to the commencement of any "ground-disturbing activity" for the subject project at all project locations (i.e., both on -site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching.
B. A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the earlier of the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity.
C. On the days the monitor is present, the monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Tribe. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the project applicant/lead agency upon written request to the Tribe.
D. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh from a designated point of contact for the project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities on the project site or in connection with the project are complete; or (2) a determination and written notification by the Kizh to the project applicant/lead agency that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact Kizh TCRs.
E. Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the Kizh monitor and/or Kizh archaeologist. The Kizh will recover and retain all discovered TCRs in the form and/or manner the Tribe deems appropriate, in the Tribe's sole discretion, and for any purpose the Tribe deems appropriate, including for educational, cultural and/or historic purposes.

MM TCR-2 Unanticipated Discovery of Human Remains and Associated Funerary Objects

A. Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute.
B. If Native American human remains and/or grave goods discovered or recognized on the project site, then all construction activities shall immediately cease. Health and Safety Code Section 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and all ground-disturbing activities shall immediately halt and shall remain halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe they are Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission, and Public Resources Code Section 5097.98 shall be followed.
C. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2).
D. Construction activities may resume in other parts of the project site at a minimum of 200 feet away from discovered human remains and/or burial goods, unless the Kizh determines in its reasonable discretion that resuming construction activities at that distance is not acceptable, and provides an alternative distance or other mitigation measures the Kizh monitor and/or archaeologist deems necessary in their reasonable discretion. (CEQA Guidelines Section 15064.5(f).)
E. Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods. Any historic archaeological material that is not Native American in origin (non-TCR) shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.
F. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

MM TCR-3 Procedures for Burials and Funerary Remains:

A. As the Most Likely Descendant ("MLD"), the Koo-nas-gna Burial Policy shall be implemented. To the Tribe, the term "human remains" encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the preparation of the soil for burial, the burial of funerary objects with the deceased, and the ceremonial burning of human remains.
B. If the discovery of human remains includes four or more burials, the discovery location shall be treated as a cemetery and a separate treatment plan shall be created.
C. The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects. Cremations will either be removed in bulk or by means as necessary to ensure complete recovery of all sacred materials.

D. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every reasonable effort to recommend diverting the project around the immediate area of where the human remains are discovered and keeping the remains in situ and protected, if feasible. If the project cannot be diverted, the burials may be removed.
E. In the event preservation in place is not possible despite good faith efforts by the project applicant/developer and/or landowner, before ground-disturbing activities may resume on the project site in the immediate area of where the human remains are discovered, the landowner shall arrange a designated site location within the footprint of the project, if feasible, for the respectful reburial of the human remains and/or ceremonial objects.
F. Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the project site but at a location agreed upon between the Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.
G. The Tribe will work closely with the project's qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be prepared and shall include (at a minimum) detailed descriptive notes and sketches. All data recovery data recovery-related forms of documentation shall be approved in advance by the Tribe. If any data recovery is performed, once complete, a final report shall be submitted to the Tribe and the NAHC. The Tribe does NOT authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains.

4.19 Utilities and Service Systems

Environmental Issue Areas Examined		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
a)	***Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?***	☐	☐	☑	☐
b)	***Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?***	☐	☐	☑	☐
c)	***Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?***	☐	☐	☑	☐
d)	***Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?***	☐	☐	☑	☐
e)	***Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?***	☐	☐	☑	☐

a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than Significant Impact. No existing utility lines would be relocated or upsized as part of the Project and no new utility lines would be constructed. The Project would connect to existing utility lines abutting the Project Site. The Project would involve utility connections to provide electric power and telecommunications services to the Project Site; connections would be made to existing facilities abutting the Site. Existing above-ground power lines located at the Project Site's frontage with Cedar Avenue would be undergrounded as part of Project construction. The Project Applicant does not anticipate the need to provide natural gas service to the Project Site (although Project natural gas usage was assumed in the air quality, energy, and greenhouse gas analyses presented earlier in the Initial Study as a conservative measure). The construction of proposed utility improvements has the potential to result in environmental effects associated with short-term air pollutant emissions, noise emissions, water quality effects, and traffic movement disruptions that are an inherent part of the Project's construction process. However, these impacts already were included in the construction-level impact analysis provided under Sections 4.3, 4.10, 4.13, and 4.17 of this Initial Study and, where significant construction-related impacts are identified under these sections, feasible and enforceable mitigation measures are imposed by this Initial Study to reduce the Project's impacts to less-than-significant levels. There are no significant

environmental impacts specifically related to the construction of the Project's proposed utility connections/improvements.

b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less than Significant Impact. The City of Rialto is responsible for supplying potable water to the Project Site and surrounding area. As discussed in the *2020 San Bernardino Valley Regional Urban Water Management Plan (UWMP)*, which applies to and was adopted by the City, adequate water supplies are projected to be available to meet the City's estimated water demand through at least 2045 under normal, historic single-dry and historic multiple-dry year conditions (WSC, 2021, pp. 5-8 to 5-22). The *UWMP* forecasts for projected water demand rely on the City's adopted General Plan Land Use Map. Because the Project would be consistent with the City's General Plan land use designation for the Project Site, the water demand associated with the Project was considered in the demand anticipated by the *2020 San Bernardino Valley Regional UWMP* and analyzed therein. Based on the conclusions within the *2020 San Bernardino Valley Regional UWMP*, the City has sufficient water supplies available to serve the Project from existing entitlements/resources and no new or expanded entitlements are needed. A less than significant impact would occur.

c) Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less than Significant Impact. Based on wastewater generation rates from the City of Rialto's master sewer study, the Project is calculated to generate 13,650 gallons per day (gpd) of wastewater (1,500 gpd/acre × 9.1 acres = 13,650 gpd). Wastewater generated by the Project would be treated by the Rialto Wastewater Treatment Plan (RWWTP). The RWWTP has an existing treatment capacity of approximately 11.7 million gallons of wastewater per day and treats approximately 7.0 million gallons of wastewater per day on average (WSC, 2021; p. 3-35). Therefore, the RWTP has approximately 4.7 million gallons (11.7 million gpd – 7.0 million gpd = 4.7 million gpd) of excess treatment capacity under existing conditions. The wastewater generated by the Project would only represent approximately 0.3 percent of the excess treatment capacity of the RWWTP ([13,650 gpd ÷ 4.7 million gpd] × 100 = 0.29 %); therefore, it is anticipated that RWWTP has sufficient treatment capacity to provide service to the Project. Because there is adequate capacity at existing treatment facilities to serve Project demands, impacts would be less than significant.

d) Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less than Significant Impact. The Project would be required to comply with mandatory waste reduction requirements of the California Integrated Waste Management Act (AB 939), the California Solid Waste Reuse and Recycling Act of 1991 (Cal Pub Res. Code Section 42911), and Chapter 24 (Solid Waste) of the City of Rialto Municipal Code. Notwithstanding, construction and operation of the Project would result in the generation of solid waste requiring disposal at a landfill.

Construction of the Project would generate solid waste requiring landfill disposal in the form of demolition debris, remnants of unused construction materials, and discarded materials and packaging. Based on a proposed building area of 201,239 s.f. and a construction waste generation factor of 4.34 pounds per

square foot (EPA, 2009), approximately 436.7 tons of waste is expected to be generated over the course of the Project's construction phase ([201,239 sq. ft. × 4.34 lbs/sq. ft] ÷ 2,000 lbs/ton = 436.7 tons), or approximately 1.6 tons per day (based on an estimated 270 days for building construction). CALGreen (Title 24, Part 11) requires that a minimum of 65% of all solid waste be diverted from landfills (by recycling, reusing, and other waste reduction strategies) consistent with the State's solid waste reduction goals; therefore, the Project is estimated to generate a total of approximately 152.8 tons of construction waste requiring landfilling during the construction phase, or approximately 0.57 tons per day.

Non-recyclable demolition debris and construction waste generated by the Project would be disposed at the Mid-Valley Landfill. The Project's short-term generation of this volume of construction waste is not in excess of State or local disposal standards, or in excess of the local infrastructure capacity to handle the waste disposal. In December 2021, the peak daily tonnage deposited at the Mid-Valley Landfill was approximately 4,273, which is well below its maximum permitted daily disposal volume of 7,500 tons per day (CalRecycle, 2022). The estimated 0.57 tons per day of waste that would be generated during Project construction would represent only approximately 0.008% of the maximum permitted daily disposal volume at the Mid-Valley Landfill and approximately 0.02% of the excess available disposal capacity at the Landfill (based on the abovementioned December 2021 disposal rate); thus, demolition and construction waste generated by the Project is not anticipated to cause the landfill to exceed its maximum permitted daily disposal volume. Furthermore, the Mid-Valley Landfill is permitted to operate until at least the year 2045 and would not reach its maximum permitted disposal capacity during the Project's construction period. The Mid-Valley Landfill would have sufficient daily capacity to accept solid waste generated by the Project's construction phase; therefore, impacts to landfill capacity associated with the Project's near-term construction activities would be less than significant.

Based on a daily waste generation factor of 1.42 pounds of waste per 100 square feet of industrial/warehouse building area obtained from CalRecycle (CalRecycle, 2019a), long-term operation of the Project would generate approximately 1.4 tons of solid waste per day ([201,239 sq. ft. × 1.42 lbs/100 sq. ft] ÷ 2,000 lbs/ton = 1.4 tons). A minimum of 50 percent of all solid waste would be required to be recycled pursuant to AB 939, consistent with the State's solid waste reduction goals; therefore, the Project would generate approximately 0.71 tons per day of solid waste requiring disposal at a landfill. The Project's long-term generation of this volume of solid waste is not in excess of State or local disposal standards, or in excess of the local infrastructure capacity to handle the waste disposal. The estimated 0.71 tons per day of solid waste that would be generated by Project operations would represent approximately 0.01 percent of the Mid-Valley Landfill's maximum permitted daily capacity of 7,500 tons per day and approximately 0.2 percent of the Landfill's current excess daily disposal capacity (based on the peak December 2021 disposal volume disclosed on the previous page). Because the Project would generate a relatively small amount of solid waste per day as compared to the permitted daily capacity at the Mid-Valley Landfill, impacts to regional landfill facilities during the Project's long-term operational activities would be less than significant.

e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant Impact. The California Integrated Waste Management Act (AB 939), signed into law in 1989, established an integrated waste management system that focused on source reduction, recycling, composting, and land disposal of waste. In addition, the bill established a 50% waste reduction requirement for cities and counties by the year 2000, along with a process to ensure environmentally safe

disposal of waste that could not be diverted. Per the requirements of the Integrated Waste Management Act, the San Bernardino County Board of Supervisors adopted the County of San Bernardino Countywide Integrated Waste Management Plan, which outlines the goals, policies, and programs the County and its cities implement to create an integrated and cost-effective waste management system that complies with the provisions of AB 939 and its diversion mandates.

In order to assist the City of Rialto and the County of San Bernardino in achieving the mandated goals of the Integrated Waste Management Act, and pursuant to City of Rialto Municipal Code Chapter 8.08, separate bins would be provided on-site to allow tenants to separate recyclable materials from refuse. Additionally, in accordance with the California Solid Waste Reuse and Recycling Act of 1991 (PRC Section 42911), the Project is required to provide adequate areas for collecting and loading recyclable materials where solid waste is collected. The collection areas are required to be shown on construction drawings and be in place before occupancy permits are issued (CA Legislative Info, 2005). Further, in compliance with AB 341 (Mandatory Commercial Recycling Program), the future occupant(s) of the proposed Project would be required to arrange for recycling services, if the occupant generates four (4) or more cubic yards of solid waste per week (CA Legislative Info, 2011). The implementation of these mandatory requirements would reduce the amount of solid waste generated by the Project and diverted to landfills, which in turn will aid in the extension of the life of affected disposal sites. The Project Applicant would be required to comply with all applicable solid waste statutes and regulations; as such, impacts related to solid waste statutes and regulations would be less than significant.

4.20 Wildfire

Environmental Issue Areas Examined		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:					
a)	***Substantially impair an adopted emergency response plan or emergency evacuation plan?***	☐	☐	☐	☑
b)	***Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?***	☐	☐	☐	☑
c)	***Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?***	☐	☐	☐	☑
d)	***Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?***	☐	☐	☐	☑

a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

b) Would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

c) Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d) Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. The Project Site is neither located within a State Responsibility Area (SRA) nor within a "very high fire hazard severity zone" as designated by the California Department of Forestry and Fire Protection (CAL Fire, 2008). Because the Project Site is not located in an SRA and has no wildfire risk, the Project would result in no impact under related to wildfire.

4.21 Mandatory Findings of Significance

Environmental Issue Areas Examined		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
a)	***Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major period of California history or prehistory?***	☐	☑	☐	☐
b)	***Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)***	☐	☑	☐	☐
c)	***Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?***	☐	☐	☑	☐

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major period of California history or prehistory?

Less than Significant Impact with Mitigation Incorporated. All impacts to the environment, including impacts to habitat for fish and wildlife species, fish and wildlife populations, plant and animal communities, rare and endangered plants and animals, and historical and pre-historical resources were evaluated as part of this Initial Study. Throughout this Initial Study, where impacts were determined to be potentially significant, mitigation measures have been imposed to reduce those impacts to less-than-significant levels. Accordingly, with incorporation of the mitigation measures imposed throughout this Initial Study, the Project would not substantially degrade the quality of the environment and impacts would be less than significant.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less than Significant Impact with Mitigation Incorporated. As discussed throughout this Initial Study, implementation of the Project would result in effects to the environment that are individually limited after the application of the mitigation measures imposed throughout this Initial Study. Notwithstanding, there is the potential that one or more of the Project's limited direct effects on the environment could be cumulatively considerable when considered with the environmental effects of other development projects. The analysis provided below evaluates the potential for the Project to have cumulatively considerable environmental impacts.

Aesthetics

The Project represents an infill re-development Project in an urban environment. All properties adjacent to the Project Site are developed with non-residential land uses and the new development on the Project Site would have minimal effect to the existing character of the Project's viewshed. All development in the immediate vicinity of the Project would be required to comply with the development regulations and design standards contained in the City's Development Code, which would ensure that minimum standards related to visual character and quality are met to preclude adverse aesthetic effects (e.g., size, scale, building materials, lighting). Accordingly, the Project's aesthetic impacts would not be cumulatively-considerable.

Agriculture and Forestry Resources

The Project result in no impact on agricultural and forestry resources. Therefore, there is no potential for the Project to contribute to a cumulatively-considerable impact under this topic.

Air Quality

Based on SCAQMD guidance, any direct exceedance of a regional or localized threshold also is considered to be a cumulatively considerable effect, while air pollutant emissions below applicable regional and/or localized thresholds are not considered cumulatively considerable. Neither construction nor operation of the Project would result in an exceedance of any applicable regional or localized air pollution threshold established by the SCAQMD; therefore, the Project would not result in a cumulatively considerable adverse effect to air quality.

Biological Resources

The Project Site does not support any sensitive plant or wildlife species, riparian, or sensitive natural habitat, or federally-protected wetlands; therefore, there is no potential for the Project to contribute to a cumulatively- considerable impact under these resources. Although the Project Site is highly disturbed and fragmented from other open space areas under existing conditions, there is the potential that nesting birds could be present on the Project Site prior to construction and there also is the potential that other development projects in the City or the larger San Bernardino County area could support the bird nests. The Project's potential impact to nesting birds would be precluded through standard compliance with federal and State regulations that protect nesting birds (and provided herein as MM BIO-1). All development projects with the potential to impact nesting birds would be required to comply with the same regulations as the Project; thereby avoiding substantial impacts. The Project would not result in a cumulatively considerable impact to biological resources.

Cultural Resources

The Project Site does not contain historic or known prehistoric archaeological resources and mandatory compliance with State law would preclude impacts to human remains; however, there is potential for the Project to disturb unknown (i.e., buried or masked) prehistoric archaeological resources. The potential destruction of prehistoric archaeological resources on the Project Site combined with the potential for the accidental destruction of prehistoric archaeological resources within the City and County would represent a cumulatively considerable effect. Therefore, the Project would implement MMs CR-1 through CR-5 which requires archaeological monitoring for all ground disturbing activities associated with the Project. With application of MMs CR-1 through CR-5, the Project would not result in substantial effects to prehistoric archaeological resources and a cumulatively considerable impact would not occur.

Energy

The Project's construction and operation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary and would not obstruct a state or local plan for renewable energy or energy efficiency. In addition, all cumulative projects would also be required to comply with the California Building Standards Code, which establishes standards for energy efficiency and "green" construction and operations. Therefore, implementation of the Project would result in a less-than-significant cumulative impact to energy.

Geology and Soils

Potential effects related to geology and soils are inherently site-specific; therefore, there is no potential for the Project to contribute to a cumulatively-considerable impact under this topic. Furthermore, all development projects would be required to comply with applicable federal, State, and local regulations that are in place to preclude adverse geology and soils effects, including effects related to strong seismic ground shaking, fault rupture, soil erosion, and hazardous soil conditions (e.g., liquefaction, expansive soils, landslides).

Notwithstanding the information above, there is the potential for the Project to contribute to the cumulative loss of important fossil resources in the region. Although development of the Project Site would not impact any known paleontological resources, the Project Site is underlain by alluvial and alluvial fan deposits with a high paleontological sensitivity for large, terrestrial Ice Age vertebrates. Other projects within the region atop similar alluvial and alluvial fan deposits also could have the potential to impact unknown, subsurface paleontological resources during ground-disturbing activities. Therefore, the potential for development on the Project Site to impact subsurface paleontological resource deposits is a cumulatively-considerable impact. Application of MMs GEO-1 through GEO-4 would reduce the Project's cumulative impacts to a less-than-significant level.

Greenhouse Gas Emissions

As described in the preceding analysis, global climate change (GCC) occurs as the result of global emissions of GHGs. An individual development project does not have the potential to result in direct and significant GCC-related effects in the absence of cumulative sources of GHGs. The CEQA Guidelines also emphasize that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis (See CEQA Guidelines Section 15130(f)). Accordingly, the preceding analysis reflects a cumulative impact analysis of the GHG emissions related to the Project. As concluded under Responses 4.8(a) and (b), the Project would not result in a cumulatively-considerable impact related to GHG emissions.

Hazards and Hazardous Materials
Potential effects related to hazards and hazardous materials are inherently site-specific and related to conditions that exist on an individual property or potential operations. Furthermore, federal, State, and local regulations are in place to ensure proper handling, transport, storage, and use of hazardous materials and preclude significant impacts under this topic.

Hydrology and Water Quality
Construction and operation of the Project and other projects in the Santa Ana River watershed have the potential to result in water quality impacts, including erosion and sedimentation. However, in accordance with applicable federal, State, and local regulations, all development projects would be required to implement plans during construction and operation (e.g., SWPPP and WQMP) to preclude adverse effects to water quality, which would avoid a cumulatively-considerable impact.

The Project and other projects in the Santa Ana River Basin would be required to comply with federal, State, and local regulations in order to preclude flood hazards both on- and off-site. Compliance with federal, State, and local regulations would require on-site areas to be protected, at a minimum, from flooding during peak storm events (i.e., 100-year storm) and that proposed development would not expose downstream properties to increased flooding risks during peak storm events. Accordingly, a cumulatively-considerable effect related to flooding would not occur.

Land Use and Planning
The Project would not physically divide an established community, or conflict with applicable land use/planning documents; therefore, there is no potential for the Project to contribute to a cumulatively-considerable impact related to land use and planning.

Mineral Resources
The Project would have no impact on mineral resources. Therefore, there is no potential for the Project to contribute to a cumulatively-considerable impact under this topic.

Noise
Noise levels diminish rapidly with distance; therefore, for a development project to contribute to a noise-related cumulative impact it must be located in close proximity to another development project or source of substantial noise. There are no construction projects in the immediate vicinity of the Project Site that would overlap with Project-related construction activities. Accordingly, cumulatively-considerable impacts related to periodic noise and construction-related vibration would not occur. Under long-term operating conditions, the Project would comply with the City of Rialto noise ordinance and would not produce substantial noise or noticeable vibration at the Project Site; all nearby development projects would similarly be required to comply with applicable noise and vibration control regulations, which would avoid a cumulatively considerable impact. Lastly, the analysis under Response 4.13(a) demonstrates that the Project would not result in a cumulatively considerable impact related to transportation noise. Based on the foregoing

Population and Housing
The Project would not implement land uses that generate new residents and would not require the construction of replacement housing. The Project would implement the City's General Plan land use map and the City has anticipated – and planned for – the growth that would occur on the Project Site. The Project would not result in an adverse, cumulatively-considerable environmental effect related to population and housing.

Public Services

All development projects in the City of Rialto, including the Project, would be required to pay development impact fees, a portion of which would be used by the City for the provision of public services, to offset the incremental increase in demand for fire protection and police protection services. Furthermore, future development would generate an on-going stream of property tax revenue and sales tax revenue, which would provide funds that could be used by the City of Rialto for the provision of fire and police protection services. The Project would not directly result in the introduction of new residents to the City and, therefore, would have no potential to result in cumulatively-considerable impacts to resident-serving public facilities such as schools, parks, libraries, and other public facilities or services.

Recreation

The Project would have no impact to recreation facilities. Therefore, there is no potential for the Project to contribute to a cumulatively-considerable impact under this topic.

Transportation

The Project would not conflict with any City policies addressing the circulation network and would not generate VMT that would have the potential to contribute to a substantial increase in the total citywide or regional VMT (Urban Crossroads, 2022f, pp. 64-65). Therefore, implementation of the Project would not contribute to any adverse, cumulatively considerable transportation effects.

Tribal Cultural Resources

Development activities on the Project Site would not impact any known tribal cultural resources. However, there is the remote potential that such resources are buried beneath the surface of the Project Site and could be impacted during construction. Other projects within region would similarly have the potential to impact unknown, subsurface tribal cultural resources during ground-disturbing activities. Therefore, the potential for development on the Project Site to impact subsurface tribal cultural resource deposits is a cumulatively considerable impact. Application of MMs CR-1 though CR-5 would reduce the Project's cumulative impacts to less-than-significant levels.

Utilities and Service Systems

Development of public utility infrastructure is part of an extensive planning process involving utility providers and jurisdictions with discretionary review authority. The coordination process associated with the preparation of infrastructure plans is intended to ensure that adequate public utility services and resources are available to serve both individual development projects and cumulative growth in the region. Each individual development project is subject to review for utility capacity to avoid unanticipated interruptions in service or inadequate supplies. Coordination with the utility providers would allow for the provision of utility services to the Project and other developments. The Project and other planned projects are subject to connection and service fees to offset increased demand and assist in facility expansion and service improvements (at the time of need). Because of the utility planning and coordination activities described above, cumulatively considerable impacts to utilities and service systems would not occur.

Wildfire

The Project Site is not located in an SRA and is not subject to high wildfire hazards; therefore, no cumulatively-considerable impacts associated with wildfire would occur as a result of development of the Project.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant Impact. The Project's potential to result in environmental effects that could adversely affect human beings, either directly or indirectly, has been discussed throughout this Initial Study. In instances where the Project has potential to result in direct or indirect adverse effects to human beings (air quality and associated effects on human health from air pollutants, and construction-related noise and potential effects on hearing impairment), project design feature best practices and mitigation measures have been applied to ensure impacts to not rise above a level of significance. With required implementation of project design features and the mitigation measures identified in this Initial Study, construction and operation of the proposed Project would not involve any activities that would result in environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly.

5.0 MITIGATION, MONITORING, AND REPORTING PROGRAM (MMRP)

Impact	Mitigation Measure (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
Biological Resources					
Threshold d: Upon mandatory compliance with applicable federal and State regulations, the Project would not result in substantial adverse effects to nesting and migratory birds. Nonetheless, mitigation is provided to ensure compliance with applicable regulatory requirements.	**MM BIO-1:** If construction commences between February 1 and August 31, within 30 days of mobilizing construction equipment to the Project Site, all on-Site trees and trees within 500 feet of the Project Site shall be inspected by a qualified biologist for the presence of nesting birds. If the survey reveals no active nesting, construction may proceed without restriction. If the survey identifies the presence of active sensitive migratory bird nests, then the nests shall not be disturbed unless the qualified biologist verifies through non-invasive methods that either (i) the adult birds have not begun egg-laying and incubation; or (ii) the juveniles from the occupied nests are capable of independent survival. If the biologist is not able to verify these conditions, then no disturbance shall occur within a buffer zone specified by the qualified biologist for each nest or nesting site. The buffer zone shall be species-appropriate (no less than 100-foot radius around the nest for non-raptors and no more than a 500-foot radius around the nest for raptors) and shall be sufficient to protect the nest from direct and indirect impacts from construction activities, The size and location of buffer zones, if required, shall be based on consultation with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service and shall be subject to review and approval by the City of Fontana. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved buffer zone shall be	Project Applicant; Project Biologist	City of Rialto Community Development Department (Planning and Building & Safety Divisions)	Within 30 days prior to initiation of grading activities.	Less-than-Significant Impact

Impact	Mitigation Measure (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	marked in the field with construction fencing, within which no vegetation clearing or ground disturbance shall commence until the qualified biologist verifies that any nest is no longer occupied and/or juvenile birds can survive independently from the nests.				
Cultural Resources					
Threshold b: There is potential for the Project to directly or indirectly destroy unknown, important archaeological resources that may be buried or masked on the Project site.	**MM CR-1:** Prior to the issuance of a grading permit, the Project Applicant shall provide evidence to the City of Rialto that an archaeologist that meets the latest version of the Secretary of the Interior Professional Qualifications Standards (hereafter "Project Archaeologist") has been retained to conduct the training and monitoring activities described in Mitigation Measure CR-2 and Mitigation Measure CR-3.	Project Applicant; Project Archaeologist	City of Rialto Community Development Department (Planning Division)	Prior the issuance of a grading permit.	Less-than-Significant Impact with Mitigation Incorporated
	MM CR-2: Prior to the issuance of a grading permit, the Project Applicant or construction contractor shall provide evidence to the City of Rialto that the construction site supervisors and crew members involved with grading and trenching operations have received training by the Project Archaeologist to recognize prehistoric archaeological resources (historic and prehistoric) should such resources be unearthed during ground-disturbing construction activities. The training will include a brief review of the cultural sensitivity of the area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of archaeological resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be	Project Applicant; Project Archaeologist	City of Rialto Community Development Department (Planning Division)	Prior the issuance of a grading permit.	

Impact	Mitigation Measure (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	properly evaluated; and any other appropriate protocols. All new supervisorial construction personnel involved with grading and trenching operations that begin work on the Project Site after the initial training session must take the training prior to beginning work on-site.				
	MM CR-3: The Project Archaeologist shall conduct monitoring during all grading, trenching, and excavation activities that occur within previously undisturbed on the Project Site (i.e., soils below the on-site layer of artificial fill). The Project Archaeologist shall be equipped to salvage artifacts if they are unearthed to avoid construction delays. Should the Project Archaeologist determine that there are no archaeological resources within the Project's disturbance area or should the archaeological sensitivity be reduced to low during construction activities, archaeological monitoring activities can be reduced to spot-checking or may shall be allowed to cease.	Project Applicant; Project Archaeologist	City of Rialto Community Development Department (Planning Division)	During grading, trenching, and excavation activities.	
	MM CR-4: If a suspected significant archaeological resource is found, the construction supervisor shall immediately halt grading operations within a 50-foot radius around the find ("buffer area"), redirect grading operations outside of the buffer area, and seek identification and evaluation of the suspected resource by the Project Archaeologist. This requirement shall be noted on all grading plans and the construction contractor shall be obligated to comply with the note. The Project Archaeologist shall evaluate the suspected resource and make a determination of	Project Applicant; Project Archaeologist	City of Rialto Community Development Department (Planning Division)	If a significant archaeological resource is discovered on the property.	

Impact	Mitigation Measure (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	significance pursuant to CEQA Guidelines Section 15064.5 and California Public Resources Code Section 21083.2. If the resource is significant, Mitigation Measure CR-5 shall apply. **MM CR-5:** If a significant archaeological resource is discovered, ground disturbing activities shall be suspended 50 feet around the resource until a treatment plan is implemented. A treatment plan shall be prepared and implemented, subject to approval by the City of Rialto, to protect the identified resource(s) from damage and destruction. The treatment plan shall contain a research design and data recovery program necessary to document the size and content of the discovery such that the resource(s) can be evaluated for significance under CEQA criteria. The research design shall list the sampling procedures appropriate to exhaust the research potential of the archaeological resource(s) in accordance with current professional archaeology standards. In the event the discovered resource(s) is or suspected to be of Native American origin, the treatment plan shall require monitoring by the appropriate Native American Tribe(s) during data recovery and shall require that all recovered artifacts undergo basic field analysis and documentation or laboratory analysis, whichever is appropriate. At the completion of the basic field analysis and documentation or laboratory analysis, any recovered resource(s) shall be processed and curated according to current professional repository standards. The collections and associated records shall be donated to an appropriate curation facility, or, the artifacts	Project Applicant; Project Archaeologist	City of Rialto Community Development Department (Planning Division)	If a significant archaeological resource is discovered on the property.	

Impact	Mitigation Measure (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	may be delivered to the appropriate Native American Tribe(s) if that is recommended by the City of Rialto. A final report containing the significance and treatment findings shall be prepared by the archaeologist and submitted to the City of Rialto, the South Central Coastal Information Center at California State University, Fullerton, and the appropriate Native American Tribe(s).				
Geology and Soils					
Threshold f: The Project has the potential to directly or indirectly destroy a unique paleontological resource buried beneath the ground surface.	**MM GEO-1:** Prior to the issuance of a grading permit, the Project Applicant shall provide evidence to the City of Rialto that a qualified paleontologist ("paleontologist") has been retained by the Project Applicant or contractor to conduct monitoring of excavation activities and has the authority to halt and redirect earthmoving activities in the event that suspected paleontological resources are unearthed.	Project Applicant; Project Paleontologist	City of Rialto Community Development Department (Planning Division)	Prior to the issuance of a grading permit.	Less-than-Significant Impact with Mitigation Incorporated
	MM GEO-2: The paleontologist shall conduct full-time monitoring during grading and excavation operations in undisturbed, Pleistocene older alluvium soils (occurring in excess of 2.5 to 5 feet below ground surface) and shall be equipped to salvage fossils if they are unearthed to avoid construction delays and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. The paleontologist shall be empowered to temporarily halt or divert equipment to allow for the removal of abundant and large specimens in a timely manner. Monitoring may be reduced if the potentially fossiliferous units are not present in the subsurface, or if present, are determined upon exposure and	Project Applicant; Project Paleontologist	City of Rialto Community Development Department (Planning Division)	During grading and excavation activities.	

Impact	Mitigation Measure (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	examination by the paleontologist to have a low potential to contain or yield fossil resources.				
	MM GEO-3: Recovered specimens shall be properly prepared to a point of identification and permanent preservation, including screen washing sediments to recover small invertebrates and vertebrates, if necessary. Identification and curation of specimens into the collections of the Division of Geological Sciences, San Bernardino County Museum, shall be required for discoveries of significance as determined by the paleontological monitor.	Project Applicant; Project Paleontologist	City of Rialto Community Development Department (Planning Division)	If a significant paleontological resource is discovered on the Project Site.	
	MM GEO-4: A final monitoring and mitigation report of findings and significance shall be prepared, including lists of all fossils recovered, if any, and necessary maps and graphics to accurately record the original location of the specimens. The report shall be submitted to the City of Rialto prior to issuance of the first occupancy permit.	Project Applicant; Project Paleontologist	City of Rialto Community Development Department (Planning Division)	Prior to issuance of occupancy permit.	
Tribal Cultural Resources					
Threshold a: The Project Site does not contain any known tribal cultural resources; however, it is possible the site contains buried/masked tribal cultural resources that could be uncovered during proposed grading and excavation activities (although unlikely given the historical ground disturbances on the site).	**MM TCR-1:** Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities A. The project applicant/lead agency shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians – Kizh Nation. The monitor shall be retained prior to the commencement of any "ground-disturbing activity" for the subject project at all project locations (i.e., both on site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work).	Project Applicant; Project Archaeologist	City of Rialto Community Development Department (Planning Division)	Prior to issuance of grading permit & during grading and excavation activities..	Less-than-Significant Impact with Mitigation Incorporated

Impact	Mitigation Measure (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	"Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching. B. A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the earlier of the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity. C. On the days the monitor is present, the monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Tribe. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the project applicant/lead agency upon written request to the Tribe. D. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh from a designated point of contact for the project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities on the project site or in connection with the project are complete; or				

Impact	Mitigation Measure (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	(2) a determination and written notification by the Kizh to the project applicant/lead agency that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact Kizh TCRs. E. Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the Kizh monitor and/or Kizh archaeologist. The Kizh will recover and retain all discovered TCRs in the form and/or manner the Tribe deems appropriate, in the Tribe's sole discretion, and for any purpose the Tribe deems appropriate, including for educational, cultural and/or historic purposes. **MM TCR-2:** <u>Unanticipated Discovery of Human Remains and Associated Funerary Objects</u> A. Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute. B. If Native American human remains and/or grave goods discovered or recognized on the project site, then all construction activities shall immediately cease. Health and Safety Code Section 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and all ground-disturbing activities	Project Applicant, Construction Contractor	City of Rialto Community Development Department (Planning Division)	During grading and excavation activities.	

Impact	Mitigation Measure (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	shall immediately halt and shall remain halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe they are Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission, and Public Resources Code Section 5097.98 shall be followed. C. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). D. Construction activities may resume in other parts of the project site at a minimum of 200 feet away from discovered human remains and/or burial goods, unless the Kizh determines in its reasonable discretion that resuming construction activities at that distance is not acceptable, and provides an alternative distance or other mitigation measures the Kizh monitor and/or archaeologist deems necessary in their reasonable discretion. (CEQA Guidelines Section 15064.5(f).) E. Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods. Any historic archaeological material that is not Native American in origin (non-TCR) shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered				

Impact	Mitigation Measure (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	to a local school or historical society in the area for educational purposes. F. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance. **MM TCR-3:** <u>Procedures for Burials and Funerary Remains:</u> A. As the Most Likely Descendant ("MLD"), the Koo-nas-gna Burial Policy shall be implemented. To the Tribe, the term "human remains" encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the preparation of the soil for burial, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. B. If the discovery of human remains includes four or more burials, the discovery location shall be treated as a cemetery and a separate treatment plan shall be created. C. The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects. Cremations will either be removed in bulk or by means as necessary to ensure complete recovery of all sacred materials. D. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will	Project Applicant; Project Archaeologist	City of Rialto Community Development Department (Planning Division)	During grading and excavation activities.	

Impact	Mitigation Measure (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every reasonable effort to recommend diverting the project around the immediate area of where the human remains are discovered and keeping the remains in situ and protected, if feasible. If the project cannot be diverted, the burials may be removed. E. In the event preservation in place is not possible despite good faith efforts by the project applicant/developer and/or landowner, before ground-disturbing activities may resume on the project site in the immediate area of where the human remains are discovered, the landowner shall arrange a designated site location within the footprint of the project, if feasible, for the respectful reburial of the human remains and/or ceremonial objects. F. Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the project site but at a location agreed upon between the Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.				

Impact	Mitigation Measure (MM)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	G. The Tribe will work closely with the project's qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be prepared and shall include (at a minimum) detailed descriptive notes and sketches. All data recovery data recovery-related forms of documentation shall be approved in advance by the Tribe. If any data recovery is performed, once complete, a final report shall be submitted to the Tribe and the NAHC. The Tribe does NOT authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains				

6.0 REFERENCES

Cited As	Reference
BFSA (2021)	Brian F. Smith and Associates, 2021. *Cultural Resources Records Search*. August 9, 2021 *(Technical Appendix C)*
CA Legislative Info (2005)	California Legislative Information, 2005. *PR Code 42911.* Effective January 1, 2005. Available on-line: http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=42911.
CA Legislative Info (2011)	California Legislative Information, 2011. *Assembly Bill No. 341.* Approved October 5, 2011. Available on-line: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201120120AB341
CAL Fire (2008)	California Department of Forestry and Fire Protection (CAL FIRE). 2008. *San Bernardino County Fire Severity Hazard Map in Local Responsibility Area*. Available: https://osfm.fire.ca.gov/media/6783/fhszl_map62.pdf
CalRecycle (2019a)	California Department of Resources Recycling and Recovery, 2018 *Estimated Solid Waste Generation Rates*. Available on-line https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates
CalRecycle (2022)	California Department of Resources Recycling and Recover, 2022. *SWIS Facility/Site Inspection Details: Mid-Valley Landfill.* Available on-line: https://www2.calrecycle.ca.gov/SolidWaste/SiteInspection/Details/336713
Caltrans (2022)	Caltrans, 2022. California Department of Transportation (Caltrans). 2022. *Scenic Highways*. Avalable on-line: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways
CDC (2018)	California Department of Conservation, 2018. *Farmland Mapping and Monitoring Program*. Available on-line: https://maps.conservation.ca.gov/DLRP/CIFF/
CDC (2019a)	California Department of Conservation, 2019. Earthquake Zones of Required Investigation. Retrieved from https://maps.conservation.ca.gov/cgs/EQZApp/app/
CDC (2019b)	California Department of Conservation, 2019. *DOGGR Well Finder*. Retrieved from https://maps.conservation.ca.gov/doggr/wellfinder/#openModal/-117.35333/33.95744/11
CDFW (2022)	California Department of Fish and Wildlife, 2022. *NCCP Plan Summarries*. Available on-line: https://wildlife.ca.gov/Conservation/Planning/NCCP/Plans
EPA (2009)	Environmental Protection Agency, 2009. *Estimating 2003 Building-Related Construction and Demolition Materials Amounts. March 2009.* Available on-line at: https://www.epa.gov/sites/production/files/2017-09/documents/estimating2003buildingrelatedcanddmaterialsamounts.pdf.
FEMA (2008)	Federal Emergency Management Agency, 2020. FEMA's National Flood Hazard Layer (NFHL) Viewer. Available on-line at: https://msc.fema.gov/portal/search?AddressQuery=1230%20w%20durst%20drive%20rialto#searchresultsanchor

Cited As	Reference
Google Earth Pro (2021)	Google Earth Pro, 2021. Version 7.3.2.5776. Computer Software.
Rialto (2010a)	City of Rialto, 2010, *City of Rialto General Plan.* Retrieved from https://www.yourrialto.com/DocumentCenter/View/1494/2010-General-Plan
Rialto (2010b)	City of Rialto, 2010, *City of Rialto General Plan EIR*.
Rialto Water Services (2021b)	*Wastewater*. Retrieved from https://rialtowater.com/about-us/wastewater/
Roux (2021)	Roux Associates, 2021. *Phase I Environmental Site Assessment*. April 12, 2021 *(Technical Appendix G)*
SoCalGeo (2021)	Southern California Geotechnical, 2021. *Updated Geotechnical Investigation Proposed Commercial/Industrial Building 1230 West Durst Drive*. March 31, 2021 *(Technical Appendix E)*
Urban Crossroads (2022a)	Urban Crossroads, 2022. *Durst Drive Warehouse Air Quality Impact Analysis*. January 26, 2022. *(Technical Appendix A)*
Urban Crossroads (2022b)	Urban Crossroads, 2022. *Durst Drive Warehouse Mobile Source Health Risk Assessment*. January 26, 2022. *(Technical Appendix B)*
Urban Crossroads (2022c)	Urban Crossroads, 2022. *Durst Drive Warehouse Energy Analysis*. January 26, 2022. *(Technical Appendix D)*
Urban Crossroads (2022d)	Urban Crossroads, 2022. *Durst Drive Warehouse Greenhouse Gas Analysis.* January 26, 2022. *(Technical Appendix F*)
Urban Crossroads. (2022e)	Urban Crossroads, 2022. *Durst Drive Warehouse Noise Impact Analysis*. January 18, 2022. *(Technical Appendix I)*
Urban Crossroads. (2022f)	Urban Crossroads, 2022. *Durst Drive Warehouse Traffic Analysis*. March 17, 2022. *(Technical Appendix J)*
USCB, 2012	United States Census Bureau. 2012. *2010 Census – Urbanized Area Reference Map: Riverside – San Bernardino, CA*. Available: https://www2.census.gov/geo/maps/dc10map/UAUC_RefMap/ua/ua75340_riverside--san_bernardino_ca/DC10UA75340_002.pdf
WestLAND (2021)	WestLAND, 2021. *Water Quality Management Plan*. June 1, 2021. *(Technical Appendix H)*
WSC (2021)	Water Systems Consulting, 2021. *2020 Upper Santa Ana River Watershed Intergrated Urban Water Management Plan.* June 2021.

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Durst Drive Warehouse

AIR QUALITY IMPACT ANALYSIS

CITY OF RIALTO

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JANUARY 26, 2022

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LIST OF ABBREVIATED TERMS

%	Percent
°F	Degrees Fahrenheit
(1)	Reference
µg/m^3	Microgram per Cubic Meter
1992 CO Plan	*1992 Federal Attainment Plan for Carbon Monoxide*
1993 CEQA Handbook	*SCAQMD's CEQA Air Quality Handbook (1993)*
2016-2040 RTP/SCS	*2016-2040 Regional Transportation Plan/Sustainable Communities Strategy*
AB 2595	California Clean Air Act
ADA	Americans with Disabilities Act
AQIA	Air Quality Impact Analysis
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
BC	Black Carbon
Brief	*Brief of Amicus Curiae by the SCAQMD in the Friant Ranch Case*
C_2Cl_4	Perchloroethylene
C_4H_6	1,3-butadiene
C_6H_6	Benzene
C_2H_3Cl	Vinyl Chloride
C_2H_4O	Acetaldehyde
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CEQA Guidelines	*2019 CEQA Statute and Guidelines*
CH_2O	Formaldehyde
City	City of Rialto
CO	Carbon Monoxide

COH	Coefficient of Haze
COHb	Carboxyhemoglobin
Cr(VI)	Chromium
CTP	Clean Truck Program
DPM	Diesel Particulate Matter
DRRP	Diesel Risk Reduction Plan
EC	Elemental Carbon
EIR	Environmental Impact Report
EMFAC	EMissions FACtor Model
EPA	Environmental Protection Agency
ETW	Equivalent Test Weight
GHG	Greenhouse Gas
GVWR	Gross Vehicle Weight Rating
H_2S	Hydrogen Sulfide
HDT	Heavy Duty Trucks
HHDT	Heavy-Heavy-Duty Trucks
HI	Hazard Index
hp	Horsepower
HRA	Health Risk Assessment
HVIP	Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project
lbs	Pounds
lbs/day	Pounds Per Day
LDA	Light Duty Auto
LDT1/LDT2	Light-Duty Trucks
LHDT1/LHDT2	Light-Heavy-Duty Trucks
LST	Localized Significance Threshold
LST Methodology	*Final Localized Significance Threshold Methodology*
MARB/IPA	March Air Reserve Base/Inland Port Airport
MATES	Multiple Air Toxics Exposure Study
MCY	Motorcycles
MDV	Medium-Duty Vehicles
MHDT	Medium-Heavy-Duty Trucks
MICR	Maximum Individual Cancer Risk
MM	Mitigation Measures
mph	Miles Per Hour
MWELO	California Department of Water Resources' Model Water Efficient

N_2	Nitrogen
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NB	Northbound
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
O_2	Oxygen
O_3	Ozone
O_2 Deficiency	Chronic Hypoxemia
OBD-II	On-Board Diagnostic
ODC	Ozone Depleting Compounds
Pb	Lead
PM_{10}	Particulate Matter 10 microns in diameter or less
$PM_{2.5}$	Particulate Matter 2.5 microns in diameter or less
POLA	Port of Los Angeles
POLB	Port of Long Beach
ppm	Parts Per Million
Project	Durst Drive Warehouse
RECLAIM	Regional Clean Air Incentives Market
RFG-2	Reformulated Gasoline Regulation
ROG	Reactive Organic Gases
RTA	Riverside Transit Agency
SB	Southbound
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
sf	Square Feet
SIPs	State Implementation Plans
SO_2	Sulfur Dioxide
SO_4	Sulfates
SO_X	Sulfur Oxides
SoCalGas	The Southern California Gas Company
SOON	Surplus Off-Road Opt-in for Nitrogen Oxides
SRA	Source Receptor Area
TA	*Durst Drive Warehouse Traffic Analysis*
TAC	Toxic Air Contaminant
TDM	Transportation Demand Management

Title 24	California Building Code
TITLE I	Non-Attainment Provisions
TITLE II	Mobile Sources Provisions
UFP	Ultrafine Particles
URBEMIS	URBan EMISsions
VICS	Voluntary Interindustry Commerce Solutions
VIP	On-road Heavy Duty Voucher Incentive Program
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
vph	Vehicles Per Hour

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Durst Drive Warehouse Air Quality Impact Analysis* (AQIA) are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the *California Environmental Quality Act (CEQA) Guidelines* (*CEQA Guidelines*) (1). Table ES-1 shows the findings of significance for each potential air quality impact under CEQA before and after any required mitigation measures (MM) described below.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Regional Construction Emissions	3.4	*Less Than Significant*	*n/a*
Localized Construction Emissions	3.7	*Less Than Significant*	*n/a*
Regional Operational Emissions	3.5	*Less Than Significant*	*n/a*
Localized Operational Emissions	3.8	*Less Than Significant*	*n/a*
CO "Hot Spot" Analysis	3.9	*Less Than Significant*	*n/a*
Air Quality Management Plan	3.10	*Less Than Significant*	*n/a*
Sensitive Receptors	3.11	*Less Than Significant*	*n/a*
Odors	3.12	*Less Than Significant*	*n/a*
Cumulative Impacts	3.13	*Less Than Significant*	*n/a*

ES.2 REGULATORY REQUIREMENTS

There are numerous requirements that development projects must comply with by law, and that were put in place by federal, State, and local regulatory agencies for the improvement of air quality.

Any operation or activity that might cause the emission of any smoke, fly ash, dust, fumes, vapors, gases, or other forms of air pollution, which can cause damage to human health, vegetation, or

other forms of property, or can cause excessive soiling on any other parcel shall conform to the requirements of the SCAQMD.

SCAQMD RULES

South Coast Air Quality Management District (SCAQMD) Rules that are currently applicable during construction activity for this Project are described below.

SCAQMD RULE 402

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

Odor Emissions. All uses shall be operated in a manner such that no offensive odor is perceptible at or beyond the property line of that use.

SCAQMD RULE 403

This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent and reduce fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to earth moving and grading activities.

Dust Control, Operations. Any operation or activity that might cause the emission of any smoke, fly ash, dust, fumes, vapors, gases, or other forms of air pollution, which can cause damage to human health, vegetation, or other forms of property, or can cause excessive soiling on any other parcel, shall conform to the requirements of the South Coast Air Quality Management District.

SCAQMD RULE 1113

This rule serves to limit the Volatile Organic Compound (VOC) content of architectural coatings used on projects in the SCAQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects.

SCAQMD RULE 1301

This rule is intended to provide that pre-construction review requirements to ensure that new or relocated facilities do not interfere with progress in attainment of the National Ambient Air Quality Standards (NAAQS), while future economic growth within the SCAQMD is not unnecessarily restricted. The specific air quality goal is to achieve no net increases from new or modified permitted sources of nonattainment air contaminants or their precursors. Rule 1301 also limits emission increases of ammonia, and Ozone Depleting Compounds (ODCs) from new, modified or relocated facilities by requiring the use of Best Available Control Technology (BACT).

SCAQMD RULE 401

A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any 1 hour that is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines.

SCAQMD RULE 2305

The SCAQMD adopted Rule 2305, the Warehouse Indirect Source Rule, on May 7, 2021. Owners and operators associated with warehouses 100,000 square feet (sf) or larger are required to directly reduce NO_X and PM emissions, or to otherwise facilitate emission and exposure reductions of these pollutants in nearby communities.

Although the Project would comply with the above regulatory requirements, it should be noted that emission reductions associated with Rules 402, 1301, 1401, and 2305 cannot be quantified in the California Emissions Estimator Model (CalEEMod) and are therefore not reflected in the emissions presented herein. Conversely, Rule 403 (Fugitive Dust) (2) and Rule 1113 (Architectural Coatings) (3) can be modeled in CalEEMod. As such, credit for Rule 403 and Rule 1113 have been taken in the analysis.

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1 INTRODUCTION

This report presents the results of the AQIA prepared by Urban Crossroads, Inc., for the proposed Durst Drive Warehouse (Project). The purpose of this AQIA is to evaluate the potential impacts to air quality associated with construction and operation of the Project and recommend measures to mitigate impacts considered potentially significant in comparison to thresholds established by the SCAQMD.

1.1 SITE LOCATION

The proposed Durst Drive Warehouse site is located at 1230 West Durst Drive in the City of Rialto, as shown on Exhibit 1-A.

The Project is surrounded by industrial uses. According to the City of Rialto Land Use Map. As per the Land Use Map, the Project site is designated for Light Industrial uses. The Light Industrial land use designation allows for light industrial activity such as processing, packaging, machinery repair, fabrication, distribution, warehousing and storage, research and development, and similar uses which are low impact (4).

1.2 PROJECT DESCRIPTION

The Project is proposed to consist of a single 201,239 square foot (sf) warehouse building which includes APNs 1280-622-5, -6, and -7. However, this analysis was performed on an earlier version of the site plan that included a larger building floor area than what is currently proposed, and therefore, the analysis overstates the Project's impacts[1]. It is anticipated that the Project would be developed in a single phase with an anticipated Opening Year of 2023. The proposed Project land use is consistent with the City's Light Industrial land use designation.

It is expected that the Project business operations would primarily be conducted within the enclosed buildings, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. This analysis includes a conservative assumption of on-site Project-related emission sources for potential future tenants, including architectural coatings, consumer products, landscape maintenance equipment, natural gas, electricity, mobile operations, and on-site cargo handling equipment. This analysis is intended to describe air quality impacts associated with the expected typical operational activities at the Project site. To present a conservative approach, this report assumes the Project would operate 24-hours daily for seven days per week.

[1] For purposes of this analysis, a building floor area of 203,350 square feet was evaluated.

EXHIBIT 1-A: LOCATION MAP

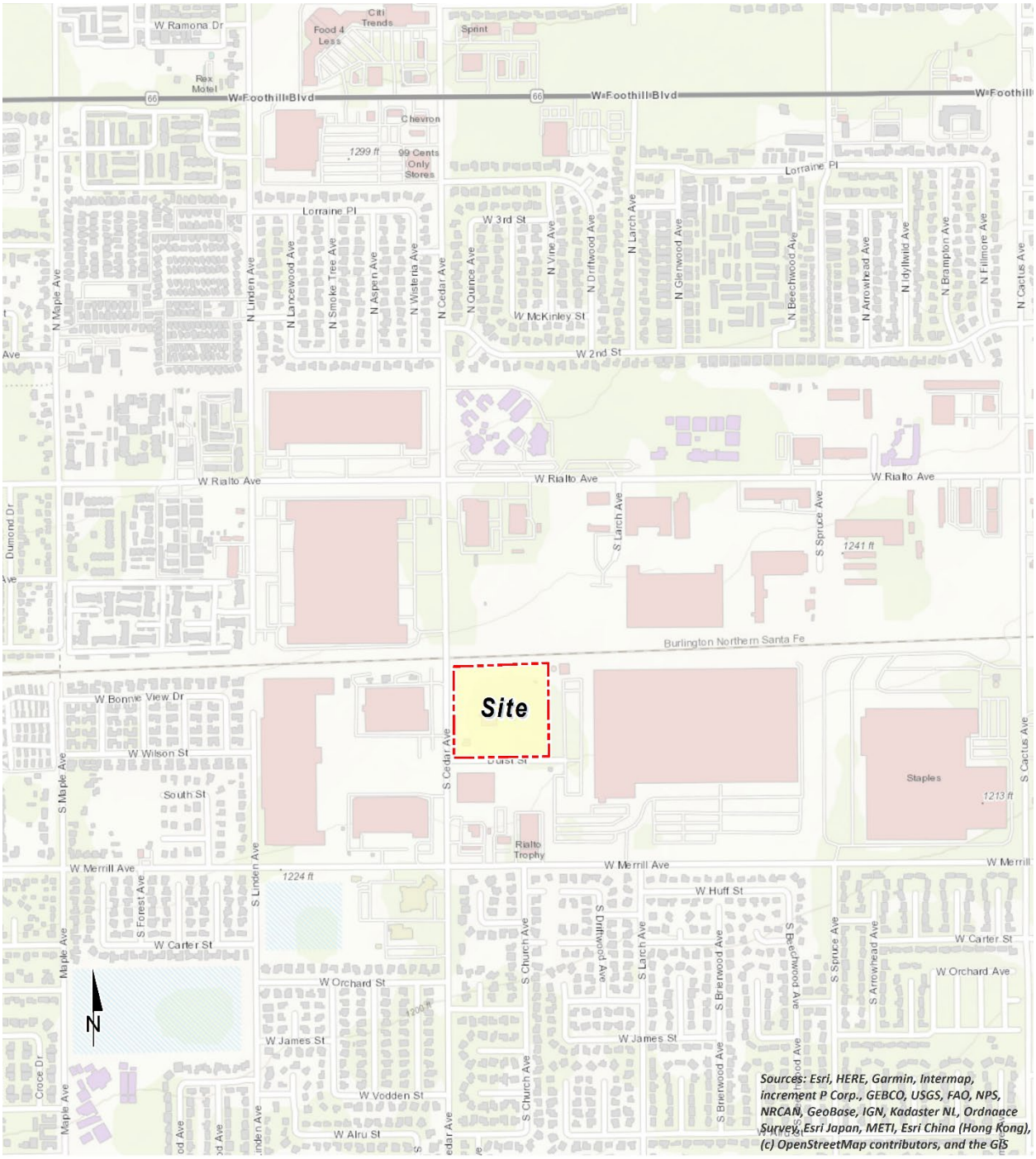
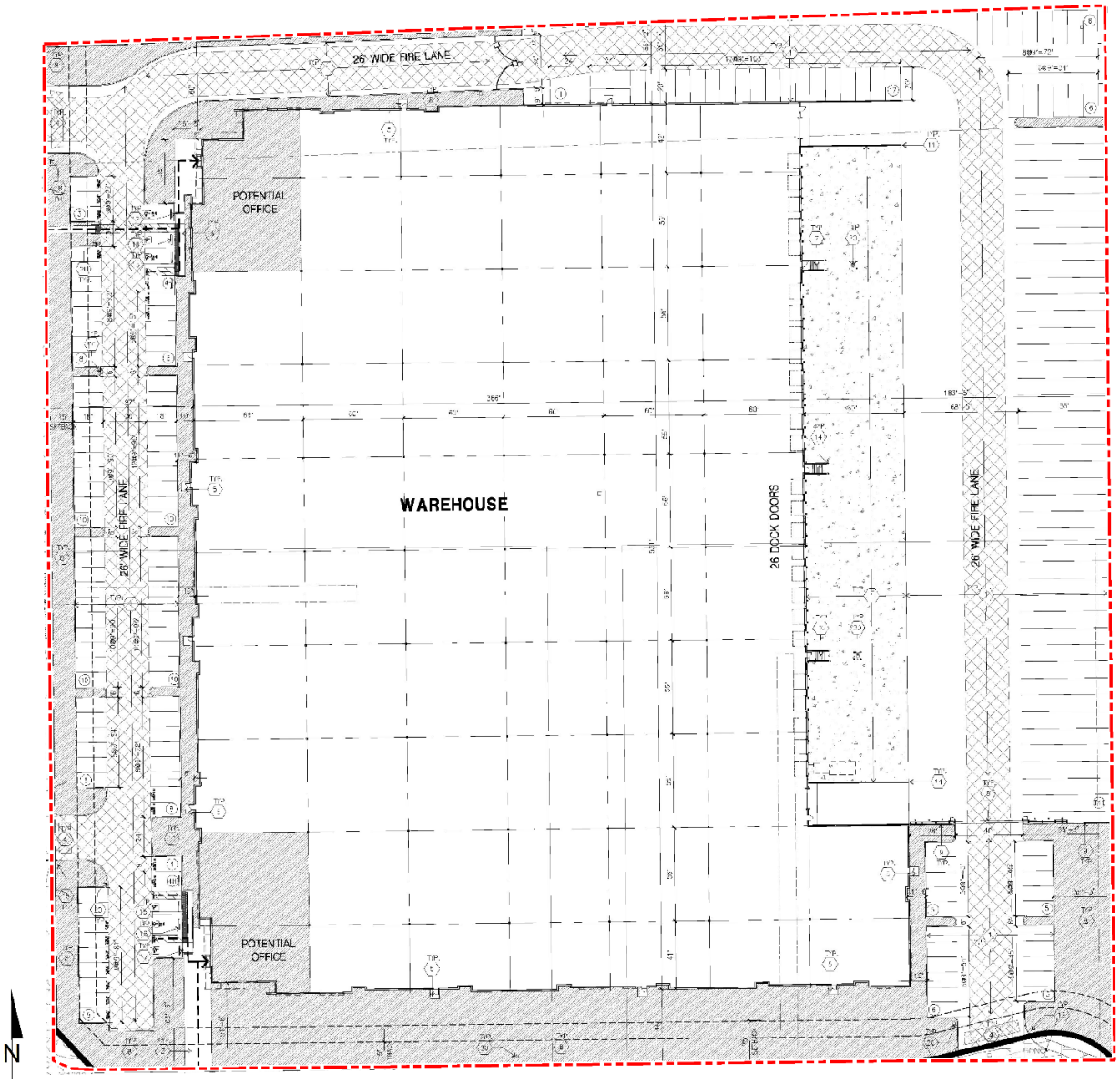


EXHIBIT 1-B: SITE PLAN



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2 AIR QUALITY SETTING

This section provides an overview of the existing air quality conditions in the Project area and region.

2.1 SOUTH COAST AIR BASIN (SCAB)

The Project site is located in the SCAB within the jurisdiction of SCAQMD (5). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As previously stated, the Project site is located within the SCAB, a 6,745-square mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County.

The SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bounded by the San Gabriel Mountains to the south and west, the Los Angeles / Kern County border to the north, and the Los Angeles / San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley.

2.2 REGIONAL CLIMATE

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to middle 60s degrees Fahrenheit (°F). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide (SO_2) to sulfates (SO_4) is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71% along the coast and 59% inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90% of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los

Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14½ hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as NO_X and CO from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

2.3 WIND PATTERNS AND PROJECT LOCATION

The distinctive climate of the Project area and the SCAB is determined by its terrain and geographical location. The SCAB is located in a coastal plain with connecting broad valleys and

low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

2.4 CRITERIA POLLUTANTS

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below (6):

TABLE 2-1: CRITERIA POLLUTANTS

Criteria Pollutant	Description	Sources	Health Effects
CO	CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone (O_3), motor vehicles operating at slow speeds are the primary source of CO in the SCAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen (O_2) supply to the heart. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with O_2 transport and competing with O_2 to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for O_2 supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (O_2 deficiency) as seen at high altitudes.

Criteria Pollutant	Description	Sources	Health Effects
SO_2	SO_2 is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms SO_4. Collectively, these pollutants are referred to as sulfur oxides (SO_X).	Coal or oil burning power plants and industries, refineries, diesel engines	A few minutes of exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2. Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically, or one pollutant alone is the predominant factor.

Criteria Pollutant	Description	Sources	Health Effects
NO_X	NO_X consist of nitric oxide (NO), nitrogen dioxide (NO_2) and nitrous oxide (N_2O) and are formed when nitrogen (N_2) combines with O_2. Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. NO_X is typically created during combustion processes and are major contributors to smog formation and acid deposition. NO_2 is a criteria air pollutant and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of NO_X compounds, NO_2 is the most abundant in the atmosphere. As ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO_2 than those indicated by regional monitoring station.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO_2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups. In animals, exposure to levels of NO_2 considerably higher than ambient concentrations result in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of O_3 exposure increases when animals are exposed to a combination of O_3 and NO_2.
O_3	O_3 is a highly reactive and unstable gas that is formed when VOCs and NO_X, both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer	Formed when reactive organic gases (ROG) and NO_X react in the presence of sunlight. ROG sources include any source	Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for O_3 effects. Short-term exposure (lasting for a

Criteria Pollutant	Description	Sources	Health Effects
	months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.	that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides.	few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated O_3 levels are associated with increased school absences. In recent years, a correlation between elevated ambient O_3 levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple outdoor sports and reside in communities with high O_3 levels. O_3 exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes O_3 may be more toxic than exposure to O_3 alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.
Particulate Matter	PM_{10}: A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. Particulate matter pollution is a major cause of reduce visibility (haze) which is caused by the scattering of light	Sources of PM_{10} include road dust, windblown dust and construction. Also formed from other pollutants (acid rain, NO_X, SO_X,	A consistent correlation between elevated ambient fine particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of

Criteria Pollutant	Description	Sources	Health Effects
	and consequently the significant reduction air clarity. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. Additionally, it should be noted that PM_{10} is considered a criteria air pollutant. $PM_{2.5}$: A similar air pollutant to PM_{10} consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include SO_4 formed from SO_2 release from power plants and industrial facilities and nitrates that are formed from NO_X release from power plants, automobiles, and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. $PM_{2.5}$ is a criteria air pollutant.	organics). Incomplete combustion of any fuel. $PM_{2.5}$ comes from fuel combustion in motor vehicles, equipment, and industrial sources, residential and agricultural burning. Also formed from reaction of other pollutants (acid rain, NO_X, SO_X, organics).	asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in lifespan, and an increased mortality from lung cancer. Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to particulate matter. The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$.
VOC	VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not	Organic chemicals are widely used as ingredients in household products. Paints, varnishes, and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing and hobby products.	Breathing VOCs can irritate the eyes, nose, and throat, can cause difficulty breathing and nausea, and can damage the central nervous system as well as other organs. Some VOCs can cause cancer. Not all VOCs have all these health effects, though many have several.

Criteria Pollutant	Description	Sources	Health Effects
	form O_3 to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms VOC and ROG (see below) interchangeably.	Fuels are made up of organic chemicals. All of these products can release organic compounds while you are using them, and, to some degree, when they are stored.	
ROG	Similar to VOC, ROGs are also precursors in forming O_3 and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and NO_X react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms ROG and VOC (see previous) interchangeably.	Sources similar to VOCs.	Health effects similar to VOCs.
Lead (Pb)	Pb is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. In the past, the primary source of Pb in the air was emissions from vehicles burning leaded gasoline. The major sources of Pb emissions are ore and metals processing, particularly Pb smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the Project does not include	Metal smelters, resource recovery, leaded gasoline, deterioration of Pb paint.	Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure.

Criteria Pollutant	Description	Sources	Health Effects
	operational activities such as metal processing or Pb acid battery manufacturing. As such, the Project is not anticipated to generate a quantifiable amount of Pb emissions.		Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.
Odor	Odor means the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves (7).	Odors can come from many sources including animals, human activities, industry, natures, and vehicles.	Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

2.5 EXISTING AIR QUALITY

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. NAAQS and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 2-2 (8).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. At the time of this AQIA, the most recent state and federal standards were updated by CARB on May 4, 2016, as presented in Table 2-2. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, PM_{10}, and $PM_{2.5}$ do not exceed standards. All others are not to be equaled or exceeded. It should be noted that the three-year period is presented for informational purposes and is not the basis for how the State assigns attainment status. Attainment status for a pollutant means that the SCAQMD meets the standards set by the EPA or the California EPA (CalEPA). Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, CARB has implemented a State Implementation Plan (SIP). The SIP outlines the measures that the state will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the EPA will designate the area as a maintenance area (9).

TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (1 OF 2)

Ambient Air Quality Standards

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

See footnotes on next page …

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TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (2 OF 2)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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2.6 REGIONAL AIR QUALITY

Air pollution contributes to a wide variety of adverse health effects. The EPA has established NAAQS for six of the most common air pollutants: CO, Pb, O_3, particulate matter (PM_{10} and $PM_{2.5}$), NO_2, and SO_2 which are known as criteria pollutants. The SCAQMD monitors levels of various criteria pollutants at 37 permanent monitoring stations and 5 single-pollutant source Pb air monitoring sites throughout the air district (10). On February 21, 2019, CARB posted the 2018 amendments to the state and national area designations. See Table 2-3 for attainment designations for the SCAB (11). Appendix 2.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SCAB.

TABLE 2-3: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SCAB

Criteria Pollutant	State Designation	Federal Designation
O_3 – 1-hour standard	Nonattainment	--
O_3 – 8-hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Unclassifiable/Attainment
NO_2	Attainment	Unclassifiable/Attainment
SO_2	Unclassifiable/Attainment	Unclassifiable/Attainment
Pb[2]	Attainment	Unclassifiable/Attainment

Note: See Appendix 2.1 for a detailed map of State/National Area Designations within the SCAB
"-" = The national 1-hour O_3 standard was revoked effective June 15, 2005.

2.7 LOCAL AIR QUALITY

The SCAQMD has designated general forecast areas and air monitoring areas (referred to as Source Receptor Areas [SRA]) throughout the district in order to provide Southern California residents about the air quality conditions. The Project site is located within the Central San Bernardino Valley 1 area (SRA 34). The Central San Bernardino Valley 1 monitoring station is located approximately 5.4 miles west of the Project site and reports air quality statistics for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$.

The most recent three (3) years of data available is shown on Table 2-4 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Development Site. Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ for 2018 through 2020 was obtained from the SCAQMD Air Quality Data Tables (12). Additionally, data for SO_2 has been omitted as attainment is regularly met in the SCAB and few monitoring stations measure SO_2 concentrations.

[2] The Federal nonattainment designation for lead is only applicable towards the Los Angeles County portion of the SCAB.

TABLE 2-4: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2018-2020

Pollutant	Standard	Year		
		2018	2019	2020
O_3				
Maximum Federal 1-Hour Concentration (ppm)		0.141	0.124	0.151
Maximum Federal 8-Hour Concentration (ppm)		0.111	0.109	0.111
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	38	41	56
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.070 ppm	69	67	89
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	1.9	2.7	1.7
Maximum Federal 8-Hour Concentration	> 20 ppm	1.1	1.0	1.2
NO_2				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.063	0.076	0.066
Annual Federal Standard Design Value		0.018	0.017	0.019
PM_{10}				
Maximum Federal 24-Hour Concentration (µg/m^3)	> 150 µg/m^3	64	88	61
Annual Federal Arithmetic Mean (µg/m^3)		34.1	34.8	35.8
Number of Days Exceeding Federal 24-Hour Standard	> 150 µg/m^3	0	0	0
Number of Days Exceeding State 24-Hour Standard	> 50 µg/m^3	9	12	6
$PM_{2.5}$				
Maximum Federal 24-Hour Concentration (µg/m^3)	> 35 µg/m^3	29.20	46.50	46.10
Annual Federal Arithmetic Mean (µg/m^3)	> 12 µg/m^3	11.13	10.84	11.95
Number of Days Exceeding Federal 24-Hour Standard	> 35 µg/m^3	0	2	1

ppm = Parts Per Million
µg/m^3 = Microgram per Cubic Meter
Source: Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ was obtained from SCAQMD Air Quality Data Tables.

2.8 REGULATORY BACKGROUND

2.8.1 FEDERAL REGULATIONS

The EPA is responsible for setting and enforcing the NAAQS for O_3, CO, NO_X, SO_2, PM_{10}, and Pb (13). The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (14). The CAA also mandates that states submit and implement SIPs for local areas not meeting these

standards. These plans must include pollution control measures that demonstrate how the standards would be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions) (15) (16). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. Table 2-3 (previously presented) provides the NAAQS within the SCAB.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_X. NO_X is a collective term that includes all forms of NO_X which are emitted as byproducts of the combustion process.

2.8.2 CALIFORNIA REGULATIONS

CARB

CARB, which became part of the CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for SO_4, visibility, hydrogen sulfide (H_2S), and vinyl chloride (C_2H_3Cl). However, at this time, H_2S and C_2H_3Cl are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (17) (13).

Local air quality management districts, such as the SCAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare Air Quality Management Plans (AQMP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g., motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;

- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROGs, NO_X, CO and PM_{10}. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than 5% per year under certain circumstances.

TITLE 24 ENERGY EFFICIENCY STANDARDS AND CALIFORNIA GREEN BUILDING STANDARDS

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2019 California Green Building Code Standards that became effective January 1, 2020.

Local jurisdictions are permitted to adopt more stringent requirements, as state law provides methods for local enhancements. CALGreen recognizes that many jurisdictions have developed existing construction waste and demolition ordinances and defers to them as the ruling guidance provided they establish a minimum 65% diversion requirement.

The code also provides exemptions for areas not served by construction waste and demolition recycling infrastructure. The State Building Code provides the minimum standard that buildings must meet in order to be certified for occupancy, which is generally enforced by the local building official.

Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas (GHG) emissions. The 2019 version of Title 24 was adopted by the CEC) and became effective on January 1, 2020.

The 2019 Title 24 standards would result in less energy use, thereby reducing air pollutant emissions associated with energy consumption in the SCAB and across the State of California. For example, the 2019 Title 24 standards require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, and update indoor and outdoor lighting requirements for nonresidential buildings.

The CEC anticipates that single-family homes built with the 2019 standards would use approximately 7% less energy compared to the residential homes built under the 2016 standards. Additionally, after implementation of solar photovoltaic systems, homes built under the 2019 standards would use about 53% less energy than homes built under the 2016 standards.

Nonresidential buildings (such as the Project) would use approximately 30% less energy due to lighting upgrade requirements (18).

Because the Project would be constructed after January 1, 2019, the 2019 CALGreen standards are applicable to the Project and require, among other items (19):

NONRESIDENTIAL MANDATORY MEASURES

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3).
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8)
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section
- 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one

showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).

- Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).

- Outdoor portable water use in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (5.303.1.1 and 5.303.1.2).
- Outdoor water use in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

2.8.3 AQMP

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMP to meet the state and federal ambient air quality standards (18). AQMPs are updated regularly to ensure an effective reduction in emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.10.

2.9 REGIONAL AIR QUALITY IMPROVEMENT

The Project is within the jurisdiction of the SCAQMD. In 1976, California adopted the Lewis Air Quality Management Act which created SCAQMD from a voluntary association of air pollution control districts in Los Angeles, Orange, Riverside, and San Bernardino counties. The geographic area of which SCAQMD consists of is known as the SCAB. SCAQMD develops comprehensive plans and regulatory programs for the region to attain federal standards by dates specified in federal law. The agency is also responsible for meeting state standards by the earliest date achievable, using reasonably available control measures.

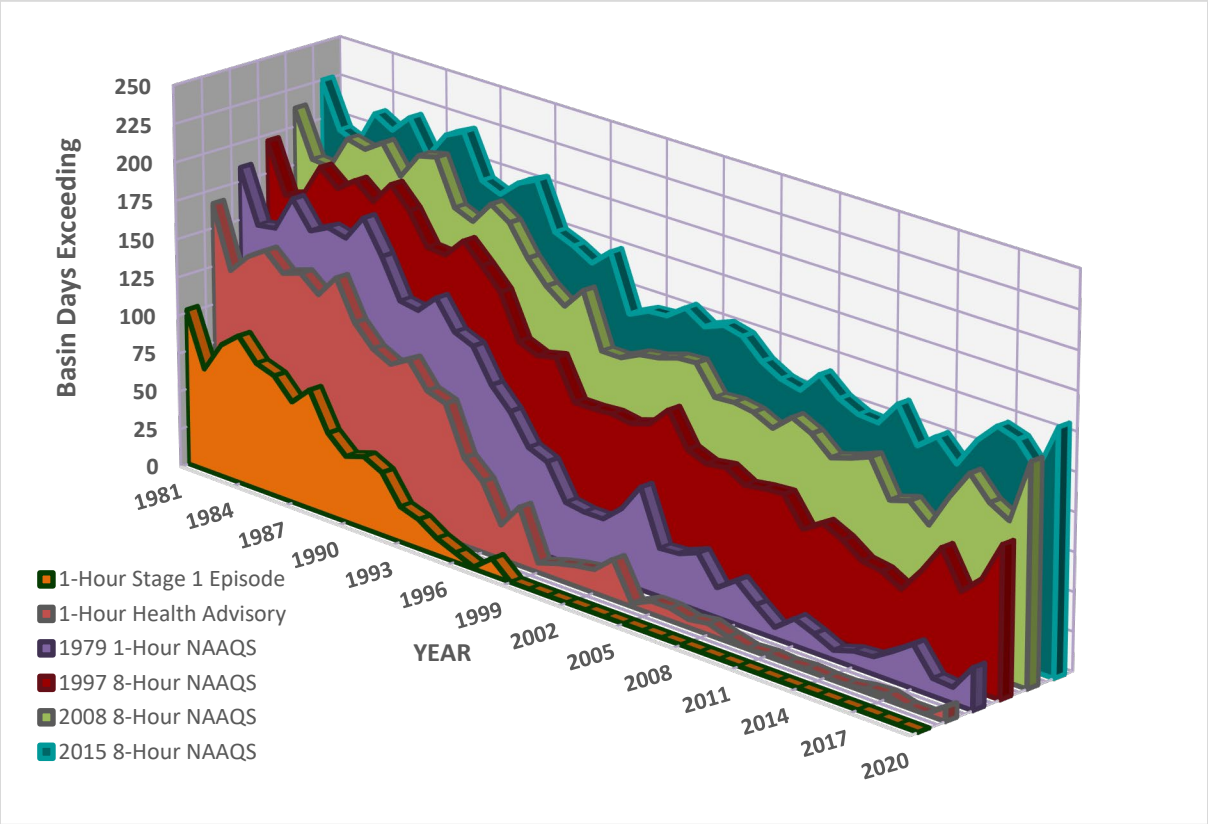
SCAQMD rule development through the 1970s and 1980s resulted in dramatic improvement in SCAB air quality. Nearly all control programs developed through the early 1990s relied on (i) the development and application of cleaner technology; (ii) add-on emission controls, and (iii) uniform CEQA review throughout the SCAB. Industrial emission sources have been significantly

reduced by this approach and vehicular emissions have been reduced by technologies implemented at the state level by CARB.

As discussed above, the SCAQMD is the lead agency charged with regulating air quality emission reductions for the entire SCAB. SCAQMD created AQMPs which represent a regional blueprint for achieving healthful air on behalf of the 16 million residents of the SCAB. The 2012 AQMP states, "the remarkable historical improvement in air quality since the 1970's is the direct result of Southern California's comprehensive, multiyear strategy of reducing air pollution from all sources as outlined in its AQMPs," (19).

Emissions of O_3, NO_X, VOC, and CO have been decreasing in the SCAB since 1975 and are projected to continue to decrease through 2020 (20). These decreases result primarily from motor vehicle controls and reductions in evaporative emissions. Although vehicle miles traveled (VMT) in the SCAB continue to increase, NO_X and VOC levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NO_X emissions from electric utilities have also decreased due to use of cleaner fuels and renewable energy. O_3 contour maps show that the number of days exceeding the 8-hour NAAQS has generally decreased between 1980 and 2020. For 2020, there was an overall decrease in exceedance days compared with the 1980 period. However, as shown on Table 2-5, O_3 levels have increased in the past three years due to higher temperatures and stagnant weather conditions. Notwithstanding, O_3 levels in the SCAB have decreased substantially over the last 30 years with the current maximum measured concentrations being approximately one-third of concentrations within the late 70's (21).

TABLE 2-5: SCAB O_3 TREND

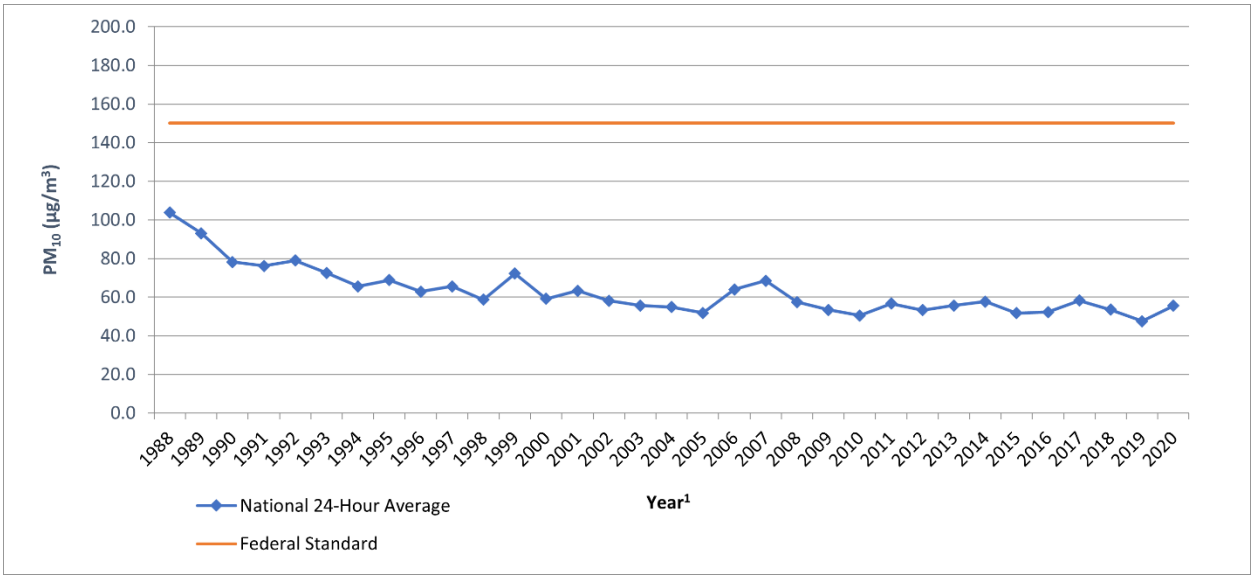


Source: 2020 SCAQMD, Historical O_3 Air Quality Trends (1976-2019)

The overall trends of PM_{10} and $PM_{2.5}$ levels in the air (not emissions) show an overall improvement since 1975. Direct emissions of PM_{10} have remained somewhat constant in the SCAB and direct emissions of $PM_{2.5}$ have decreased slightly since 1975. Area wide sources (fugitive dust from roads, dust from construction, and other sources) contribute the greatest amount of direct particulate matter emissions.

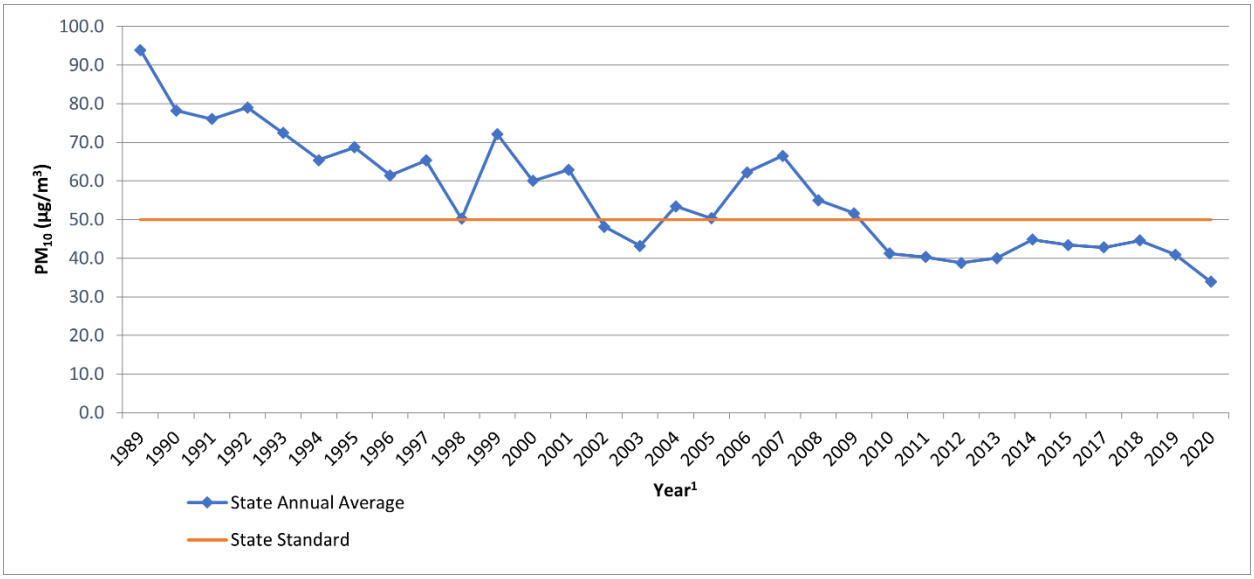
As with other pollutants, the most recent PM_{10} statistics show an overall improvement as illustrated in Tables 2-6 and 2-7. During the period for which data are available, the 24-hour national annual average concentration for PM_{10} decreased by approximately 46%, from 103.7 microgram per cubic meter (µg/m³) in 1988 to 55.5 µg/m³ in 2020 (22). Although the values are below the federal standard, it should be noted that there are days within the year where the concentrations would exceed the threshold. The 24-hour state annual average for emissions for PM_{10}, have decreased by approximately 64%, from 93.9 µg/m³ in 1989 to 33.9 µg/m³ in 2020 (22). Although data in the late 1990's show some variability, this is probably due to the advances in meteorological science rather than a change in emissions. Similar to the ambient concentrations, the calculated number of days above the 24-hour PM_{10} standards has also shown an overall drop.

TABLE 2-6: SCAB AVERAGE 24-HOUR CONCENTRATION PM_{10} TREND (BASED ON FEDERAL STANDARD)[1]



Source: 2020 CARB, iADAM: Top Four Summary: PM_{10} 24-Hour Averages (1988-2020)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

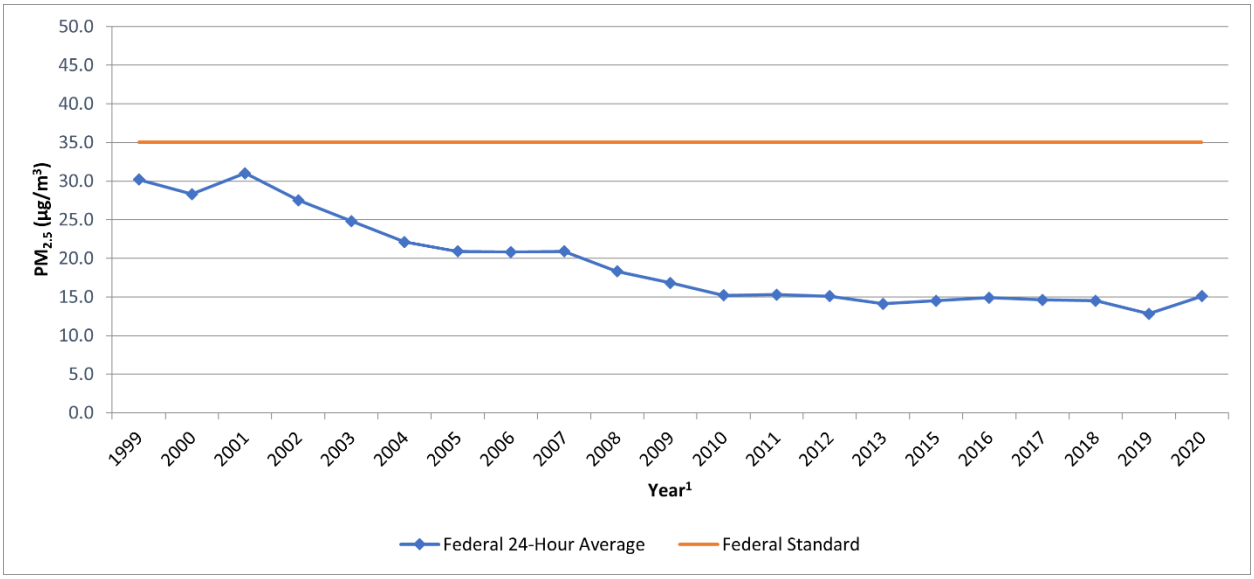
TABLE 2-7: SCAB ANNUAL AVERAGE CONCENTRATION PM_{10} TREND (BASED ON STATE STANDARD)[1]



Source: 2020 CARB, iADAM: Top Four Summary: PM_{10} 24-Hour Averages (1988-2020)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

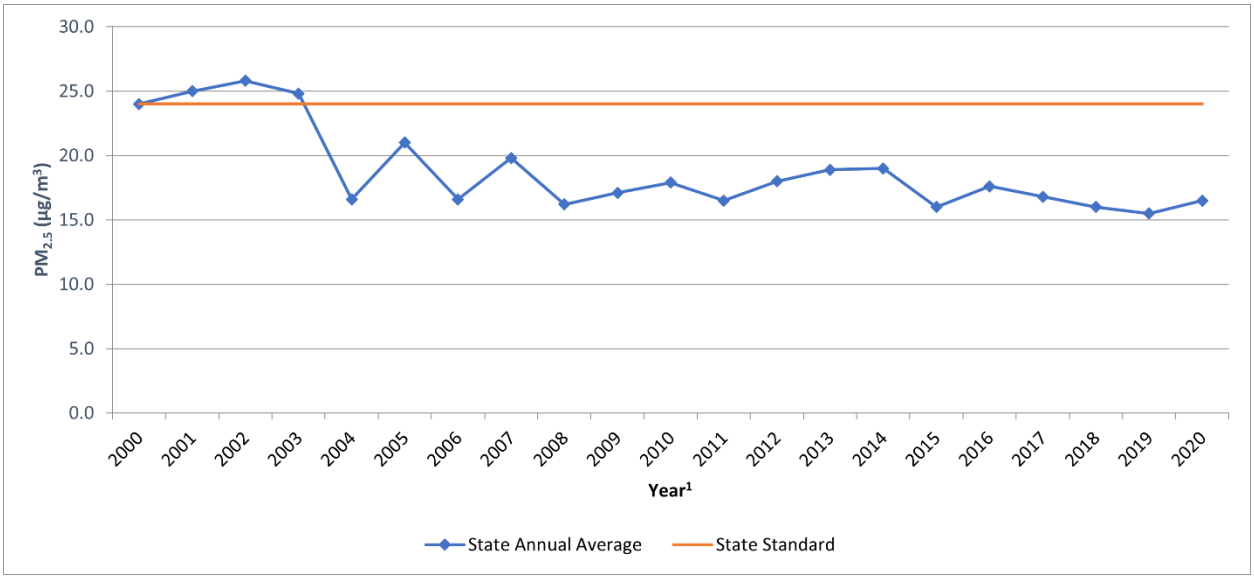
Tables 2-8 and 2-9 shows the most recent 24-hour average $PM_{2.5}$ concentrations in the SCAB from 1999 through 2020. Overall, the national and state annual average concentrations have decreased by almost 50% and 31% respectively (22). It should be noted that the SCAB is currently designated as nonattainment for the state and federal $PM_{2.5}$ standards.

TABLE 2-8: SCAB 24-HOUR AVERAGE CONCENTRATION $PM_{2.5}$ TREND (BASED ON FEDERAL STANDARD)[1]



Source: 2020 CARB, iADAM: Top Four Summary: $PM_{2.5}$ 24-Hour Averages (1999-2020)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

TABLE 2-9: SCAB ANNUAL AVERAGE CONCENTRATION $PM_{2.5}$ TREND (BASED ON STATE STANDARD)[1]



Source: 2020 CARB, iADAM: Top Four Summary: $PM_{2.5}$ 24-Hour Averages (1999-2020)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

While the 2012 AQMP PM_{10} attainment demonstration and the 2015 associated supplemental SIP submission indicated that attainment of the 24-hour standard was predicted to occur by the end of 2015, it could not anticipate the effect of the ongoing drought on the measured $PM_{2.5}$.

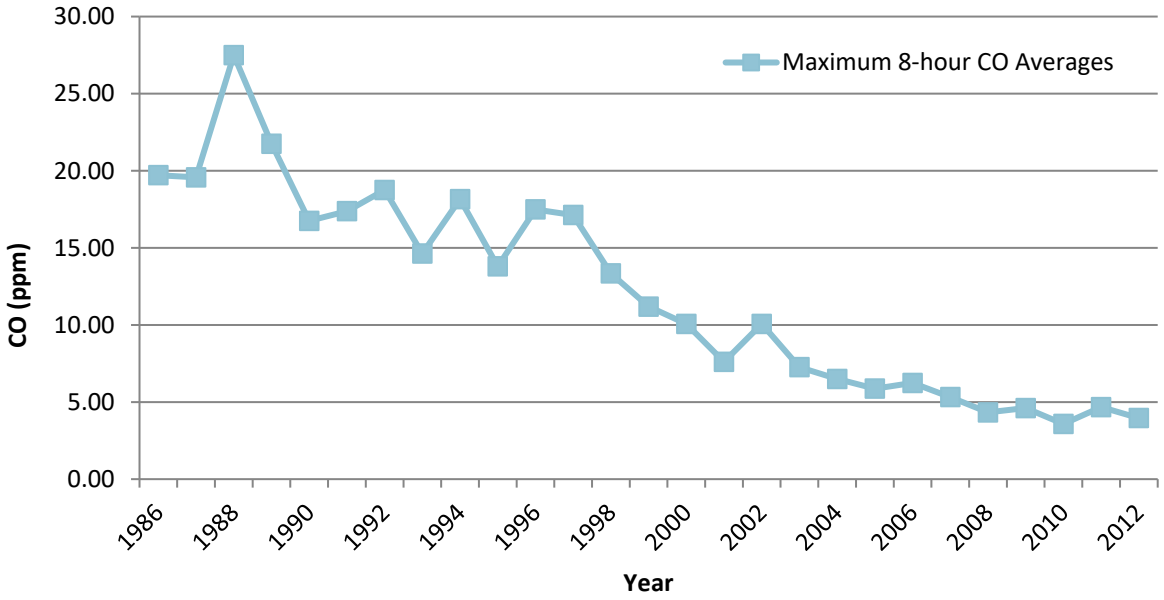
The 2006 to 2010 base period used for the 2012 attainment demonstration had near-normal rainfall. While the trend of $PM_{2.5}$-equivalent emission reductions continued through 2015, the severe drought conditions contributed to the $PM_{2.5}$ increases observed after 2012. As a result of the disrupted progress toward attainment of the federal 24-hour $PM_{2.5}$ standard, SCAQMD submitted a request and the EPA approved, in January 2016, a "bump up" to the nonattainment classification from "moderate" to "serious," with a new attainment deadline as soon as practicable, but not beyond December 31, 2019. As of March 14, 2019, the EPA approved portions of a SIP revision submitted by California to address CAA requirements for the 2006 24-hour $PM_{2.5}$ NAAQS in the Los Angeles-SCAB Serious $PM_{2.5}$ nonattainment area. The EPA also approved 2017 and 2019 motor vehicle emissions budgets for transportation conformity purposes and inter-pollutant trading ratios for use in transportation conformity analyses (23).

In March 2017, the SCAQMD released the Final 2016 AQMP. The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels (24). Similar to the 2012 AQMP, the 2016 AQMP incorporates scientific and technological information and planning assumptions, including the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016-2040 RTP/SCS) and updated emission inventory methodologies for various source categories (18).

The 2022 AQMP is currently being developed by SCAQMD to address the EPA's strengthened ozone standard. Development of the 2022 AQMP is in its early stages and no formal timeline for completion and adoption is currently known.

The most recent CO concentrations in the SCAB are shown in Table 2-10 (22). CO concentrations in the SCAB have decreased markedly — a total decrease of more about 80% in the peak 8-hour concentration from 1986 to 2012. It should be noted 2012 is the most recent year where 8-hour CO averages and related statistics are available in the SCAB. The number of exceedance days has also declined. The entire SCAB is now designated as attainment for both the state and national CO standards. Ongoing reductions from motor vehicle control programs should continue the downward trend in ambient CO concentrations.

TABLE 2-10: SCAB 8-HOUR AVERAGE CONCENTRATION CO TREND[1]

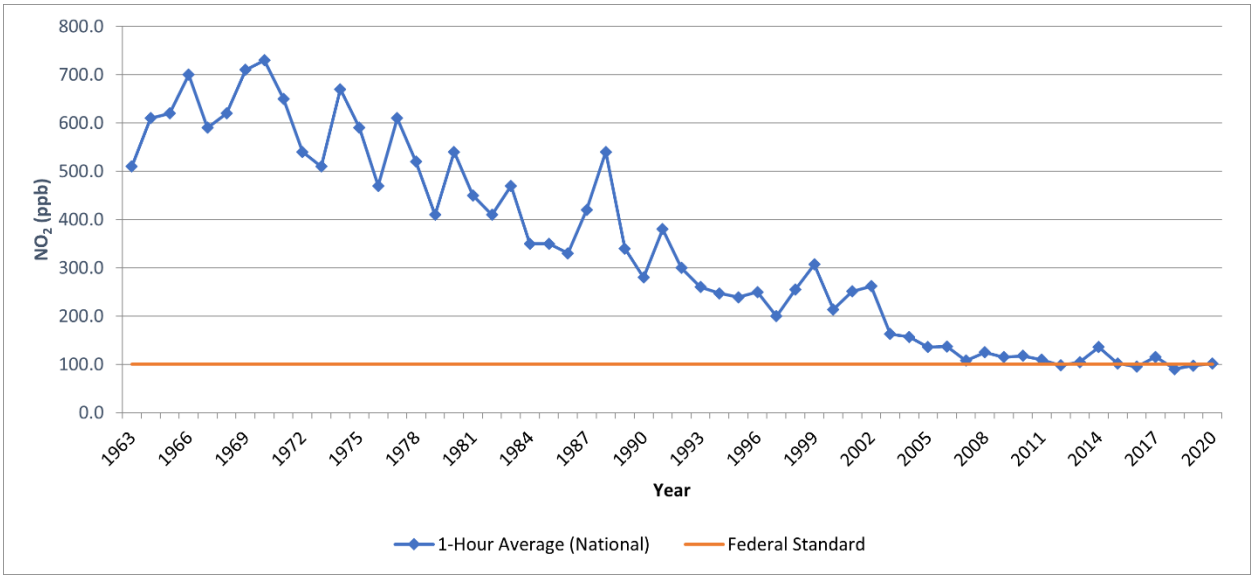


Source: 2020 CARB, iADAM: Top Four Summary: CO 8-Hour Averages (1986-2012)
[1] The most recent year where 8-hour concentration data is available is 2012.

Part of the control process of the SCAQMD's duty to greatly improve the air quality in the SCAB is the uniform CEQA review procedures required by SCAQMD's *CEQA Air Quality Handbook (1993)* (*1993 CEQA Handbook*) (25). The single threshold of significance used to assess Project direct and cumulative impacts has in fact "worked" as evidenced by the track record of the air quality in the SCAB dramatically improving over the course of the past decades. As stated by the SCAQMD, the District's thresholds of significance are based on factual and scientific data and are therefore appropriate thresholds of significance to use for this Project.

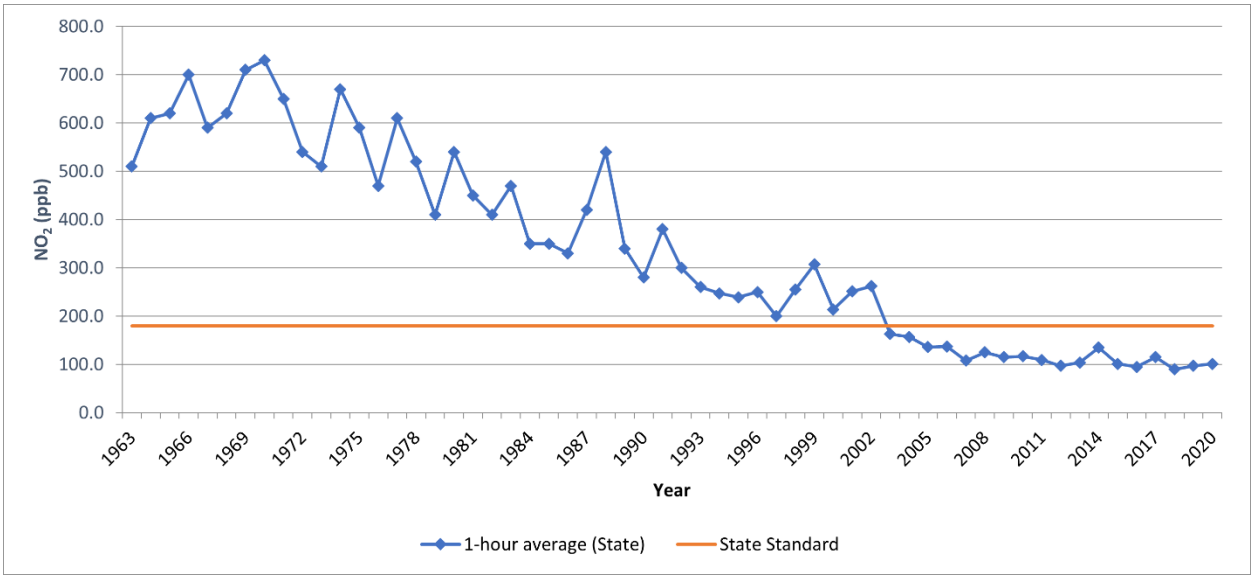
The most recent NO_2 data for the SCAB is shown in Tables 2-11 and 2-12 (22). Over the last 50 years, NO_2 values have decreased significantly; the peak 1-hour national and state averages for 2020 is approximately 80% lower than what it was during 1963. The SCAB attained the State 1-hour NO_2 standard in 1994, bringing the entire state into attainment. A new state annual average standard of 0.030 ppm was adopted by CARB in February 2007 (26). The new standard is just barely exceeded in the SCAQMD. NO_2 is formed from NO_X emissions, which also contribute to O_3. As a result, the majority of the future emission control measures would be implemented as part of the overall O_3 control strategy. Many of these control measures would target mobile sources, which account for more than three-quarters of California's NO_X emissions. These measures are expected to bring the SCAQMD into attainment of the state annual average standard.

TABLE 2-11: SCAB 1-HOUR AVERAGE CONCENTRATION NO_2 TREND (BASED ON FEDERAL STANDARD)



Source: 2020 CARB, iADAM: Top Four Summary: CO 1-Hour Averages (1963-2020)

TABLE 2-12: SCAB 1-HOUR AVERAGE CONCENTRATION NO_2 TREND (BASED ON STATE STANDARD)



Source: 2020 CARB, iADAM: Top Four Summary: CO 1-Hour Averages (1963-2020)

2.9.1 TOXIC AIR CONTAMINANTS (TAC) TRENDS

In 1984, as a result of public concern for exposure to airborne carcinogens, CARB adopted regulations to reduce the amount of TAC emissions resulting from mobile and area sources, such as cars, trucks, stationary sources, and consumer products. According to the *Ambient and Emission Trends of Toxic Air Contaminants in California* journal article (27) which was prepared for CARB, results show that between 1990-2012, ambient concentration and emission trends for

the seven TACs responsible for most of the known cancer risk associated with airborne exposure in California have declined significantly (between 1990 and 2012). The seven TACs studied include those that are derived from mobile sources: diesel particulate matter (DPM), benzene (C_6H_6), and 1,3-butadiene (C_4H_6); those that are derived from stationary sources: perchloroethylene (C_2Cl_4) and hexavalent chromium (Cr(VI)); and those derived from photochemical reactions of emitted VOCs: formaldehyde (CH_2O) and acetaldehyde (C_2H_4O)[3]. The decline in ambient concentration and emission trends of these TACs are a result of various regulations CARB has implemented to address cancer risk.

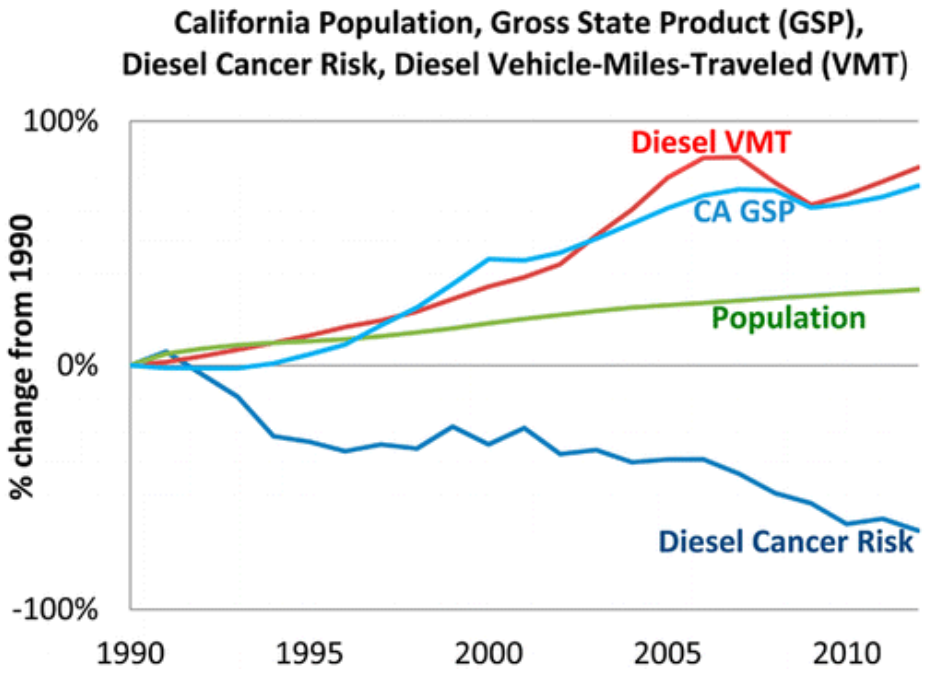
MOBILE SOURCE TACS

CARB introduced two programs that aimed at reducing mobile emissions for light and medium duty vehicles through vehicle emissions controls and cleaner fuel. In California, light-duty vehicles sold after 1996 are equipped with California's second-generation On-Board Diagnostic (OBD-II) system. The OBD-II system monitors virtually every component that can affect the emission performance of the vehicle to ensure that the vehicle remains as clean as possible over its entire life and assists repair technicians in diagnosing and fixing problems with the computerized engine controls. If a problem is detected, the OBD-II system illuminates a warning lamp on the vehicle instrument panel to alert the driver. This warning lamp typically contains the phrase "Check Engine" or "Service Engine Soon." The system would also store important information about the detected malfunction so that a repair technician can accurately find and fix the problem. CARB has recently developed similar OBD requirements for heavy-duty vehicles over 14,000 pounds (lbs). CARB's phase II Reformulated Gasoline Regulation (RFG-2), adopted in 1996, also led to a reduction of mobile source emissions. Through such regulations, benzene levels declined 88% from 1990-2012. 1,3-Butadiene concentrations also declined 85% from 1990-2012 as a result of the use of reformulated gasoline and motor vehicle regulations (27).

In 2000, CARB's Diesel Risk Reduction Plan (DRRP) recommended the replacement and retrofit of diesel-fueled engines and the use of ultra-low-sulfur (<15 ppm) diesel fuel. As a result of these measures, DPM concentrations have declined 68% since 2000, even though the state's population increased 31% and the amount of diesel vehicles miles traveled increased 81%, as shown on Exhibit 2-B. With the implementation of these diesel-related control regulations, CARB expects a DPM decline of 71% for 2000-2020.

[3] It should be noted that ambient DPM concentrations are not measured directly. Rather, a surrogate method using the coefficient of haze (COH) and elemental carbon (EC) is used to estimate DPM concentrations.

EXHIBIT 2-A: DPM AND DIESEL VEHICLE MILES TREND



Source: 2020 CARB

DIESEL REGULATIONS

CARB and the Ports of Los Angeles and Long Beach (POLA and POLB) have adopted several iterations of regulations for diesel trucks that are aimed at reducing DPM. More specifically, CARB Drayage Truck Regulation (28), CARB statewide On-road Truck and Bus Regulation (29), and the Ports of Los Angeles and Long Beach Clean Truck Program (CTP) require accelerated implementation of "clean trucks" into the statewide truck fleet (30). In other words, older more polluting trucks would be replaced with newer, cleaner trucks as a function of these regulatory requirements.

Moreover, the average statewide DPM emissions for Heavy Duty Trucks (HDT), in terms of grams of DPM generated per mile traveled, would dramatically be reduced due to the aforementioned regulatory requirements.

Diesel emissions identified in this analysis would therefore overstate future DPM emissions since not all the regulatory requirements are reflected in the modeling.

CANCER RISK TRENDS

Based on information available from CARB, overall cancer risk throughout the SCAB has had a declining trend since 1990. In 1998, following an exhaustive 10-year scientific assessment process, CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant. The SCAQMD initiated a comprehensive urban toxic air pollution study called the Multiple Air Toxics Exposure Study (MATES). DPM accounts for more than 70% of the cancer risk.

In January 2018, as part of the overall effort to reduce air toxics exposure in the SCAB, SCAQMD began conducting the MATES V Program. MATES V field measurements were conducted at ten fixed sites (the same sites selected for MATES III and IV) to assess trends in air toxics levels. MATES V also included measurements of ultrafine particles (UFP) and black carbon (BC) concentrations, which can be compared to the UFP levels measured in MATES IV (31). The draft report for the MATES V study was published in late May and the comment submission deadline on June 7, 2021. In addition to new measurements and updated modeling results, several key updates were implemented in MATES V. First, MATES V estimates cancer risks by taking into account multiple exposure pathways, which includes inhalation and non-inhalation pathways. This approach is consistent with how cancer risks are estimated in South Coast AQMD's programs such as permitting, Air Toxics Hot Spots (AB2588), and CEQA. Previous MATES studies quantified the cancer risks based on the inhalation pathway only. Second, along with cancer risk estimates, MATES V includes information on the chronic non-cancer risks from inhalation and non-inhalation pathways for the first time. Cancer risks and chronic non-cancer risks from MATES II through IV measurements have been re-examined using current Office of Environmental Health Hazard Assessment (OEHHA) and CalEPA risk assessment methodologies and modern statistical methods to examine the trends over time (32).

MATES-V calculated cancer risks based on monitoring data collected at ten fixed sites within the SCAB. None of the fixed monitoring sites are within the local area of the Project site. However, MATES-V has extrapolated the excess cancer risk levels throughout the SCAB by modeling the specific grids. The Project is located within a quadrant of the geographic grid of the MATES-V model which predicted a cancer risk of 455 in one million for the area containing the Project site. DPM is included in this cancer risk along with all other TAC sources. As in previous MATES iterations, diesel PM is the largest contributor to overall air toxics cancer risk. However, the average levels of diesel PM in MATES V are 53% lower at the 10 monitoring sites compared to MATES IV. Cumulative Project generated TACs are limited to DPM.

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3 PROJECT AIR QUALITY IMPACT

3.1 INTRODUCTION

This study quantifies air quality emissions generated by construction and operation of the Project and addresses whether the Project conflicts with implementation of the SCAQMD's AQMP and Lead Agency planning regulations. The analysis of Project-generated air emissions determines whether the Project would result in a cumulatively considerable net increase of any criteria pollutant for which the SCAB is in non-attainment under an applicable NAAQS and CAAQS. Additionally, the Project has been evaluated to determine whether the Project would expose sensitive receptors to substantial pollutant concentrations and the impacts of odors. The significance of these potential impacts is described in the following sections.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the *CEQA Guidelines* (14 CCR §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (1):

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

The SCAQMD has also developed regional significance thresholds for other regulated pollutants, as summarized at Table 3-1 (33). The SCAQMD's *CEQA Air Quality Significance Thresholds* (April 2019) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

TABLE 3-1: MAXIMUM DAILY REGIONAL EMISSIONS THRESHOLDS

Pollutant	Regional Construction Threshold	Regional Operational Thresholds
NO_X	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_X	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Pb	3 lbs/day	3 lbs/day

lbs/day = Pounds Per Day

3.3 MODELS EMPLOYED TO ANALYZE AIR QUALITY

3.3.1 CALEEMOD

Land uses such as the Project affect air quality through construction-source and operational-source emissions.

In May 2021, the SCAQMD, in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the CalEEMod Version 2020.4.0. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from MMs (34). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendices 3.1 through 3.2.

3.4 CONSTRUCTION EMISSIONS

Construction activities associated with the Project will result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Construction related emissions are expected from the following construction activities:

- Demolition
- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

DEMOLITION ACTIVITIES

Based on information provided by the Project Applicant, demolition activities would result in 2,350 tons of debris.

GRADING ACTIVITIES

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called “fugitive emissions”. Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. The Project would require 67,323 cubic yards of cut and 51,388 cubic yards of fill. For purposes of analysis, a total of 15,935 cubic yards of export (67,323 cubic yards of cut - 51,388 cubic yards of fill = 15,935 cubic yards of export).

ON-ROAD TRIPS

Construction generates on-road vehicle emissions from vehicle usage for workers, hauling, and vendors commuting to and from the site. The number of workers, hauling, and vendor trips are presented below in Table 3-2. It should be noted that for Vendor Trips, specifically, CalEEMod only assigns Vendor Trips to the Building Construction phase. Vendor trips would likely occur during all phases of construction. As such, the CalEEMod defaults for Vendor Trips have been adjusted based on a ratio of the total vendor trips to the number of days of each subphase of activity.

TABLE 3-2: CONSTRUCTION TRIP ASSUMPTIONS

Construction Activity	Worker Trips Per Day	Vendor Trips Per Day	Hauling Trips Per Day
Demolition	8	5	22
Site Preparation	18	3	0
Grading	18	5	1,992
Building Construction	167	52	0
Paving	15	0	0
Architectural Coating	33	0	0

3.4.1 CONSTRUCTION DURATION

Construction is anticipated to begin in July 2022 and will last through June 2023. The construction schedule utilized in the analysis, shown in Table 3-3, represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent[4]. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (1).

TABLE 3-3: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Demolition	07/01/2022	07/28/2022	20
Site Preparation	07/29/2022	08/11/2022	10
Grading	08/12/2022	09/08/2022	20
Building Construction	09/09/2022	06/15/2023	200
Paving	05/19/2023	06/15/2023	20
Architectural Coating	05/19/2023	06/15/2023	20

[4] As shown in the CalEEMod User's Guide Version 2020.4.0, Section 4.3 "Off-Road Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

3.4.2 CONSTRUCTION EQUIPMENT

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 3-4 will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code.

TABLE 3-4: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment[1]	Amount	Hours Per Day
Demolition	Excavators	2	8
	Skid Steer Loaders	1	8
Site Preparation	Crawler Tractors	4	8
	Rubber Tired Dozers	3	8
Grading	Crawler Tractors	3	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
Building Construction	Cranes	1	8
	Crawler Tractors	3	8
	Forklifts	3	8
	Generator Sets	1	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

[1] In order to account for fugitive dust emissions, Crawler Tractors were used in lieu of Tractors/Loaders/Backhoes.

3.4.3 CONSTRUCTION EMISSIONS SUMMARY

IMPACTS WITHOUT MITIGATION

CalEEMod calculates maximum daily emissions for summer and winter periods. The estimated maximum daily construction emissions without mitigation are summarized on Table 3-5. Detailed construction model outputs are presented in Appendix 3.1. Under the assumed scenarios, emissions resulting from the Project construction will not exceed criteria pollutant thresholds established by the SCAQMD for emissions of any criteria pollutant.

TABLE 3-5: OVERALL CONSTRUCTION EMISSIONS SUMMARY – WITHOUT MITIGATION

Year	Emissions (lbs/day) [1]					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Summer						
2022	4.83	63.84	29.41	0.13	13.56	6.36
2023	55.14	40.46	43.22	0.10	4.48	2.36
Winter						
2022	4.81	64.53	29.36	0.13	13.56	6.36
2023	55.10	40.59	41.81	0.10	4.48	2.36
Maximum Daily Emissions	**55.14**	**64.53**	**43.22**	**0.13**	**13.56**	**6.36**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod construction-source (unmitigated) emissions are presented in Appendix 3.1.

3.5 OPERATIONAL EMISSIONS

Operational activities associated with the Project will result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Operational emissions are expected from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- On-Site Cargo Handling Equipment Emissions

3.5.1 AREA SOURCE EMISSIONS

ARCHITECTURAL COATINGS

Over a period of time the buildings that are part of this Project will require maintenance and will therefore produce emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings. The emissions associated with architectural coatings were calculated using CalEEMod.

CONSUMER PRODUCTS

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants. The emissions associated with use of consumer products were calculated based on defaults provided within CalEEMod.

LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. It should be noted that as October 9, 2021, Governor Gavin Newsom signed AB 1346. The bill aims to ban the sale of new gasoline-powered equipment under 25 gross horsepower (known as small off-road engines [SOREs]) by 2024. For purposes of analysis, the emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

3.5.2 ENERGY SOURCE EMISSIONS

COMBUSTION EMISSIONS ASSOCIATED WITH NATURAL GAS AND ELECTRICITY

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity are generally excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using CalEEMod.

3.5.3 MOBILE SOURCE EMISSIONS

The Project related operational air quality emissions derive primarily from vehicle trips generated by the Project, including employee trips to and from the site and truck trips associated with the proposed uses. Trips generated by the Project's proposed land uses have been estimated based on trip generation rates published by the Institute of Transportation Engineers (ITE) as provided in their *Trip Generation Manual*, *11th Edition* (2021) (35). For purposes of this analysis, the following ITE land use code and vehicle mix has been utilized:

- ITE land use code 154 (High-Cube Transload and Short-Term Storage Warehouse) has been used to derive site specific trip generation estimates for up to 347,918 sf. High cube transload/short-term storage warehouse data regarding the truck percentage and vehicle mix has been obtained from the ITE's *Trip Generation Manual Supplement* (dated February 2020). This study provides the following vehicle mix: AM Peak Hour: 80.0% passenger cars and 20.0% trucks; PM Peak Hour: 84.0% passenger cars and 16.0% trucks; Weekday Daily: 84.0% passenger cars and 16.0% trucks. The truck percentages were further broken down by axle type per the following SCAQMD recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.

APPROACH FOR ANALYSIS OF THE PROJECT

To determine emissions from passenger car vehicles, the CalEEMod defaults were utilized for trip length and trip purpose for the proposed industrial land uses.

This analysis assumes that passenger cars include Light-Duty-Auto vehicles (LDA), Light-Duty-Trucks (LDT1[5] & LDT2[6]), Medium-Duty-Vehicles (MDV), and Motorcycles (MCY) vehicle types. To account for emissions generated by passenger cars, the following fleet mix was utilized in this analysis:

TABLE 3-6: PASSENGER CAR FLEET MIX

Land Use	% Vehicle Type				
	LDA	LDT1	LDT2	MDV	MCY
High-Cube Transload Warehouse	57.81	6.00	18.53	14.94	2.72

Note: The Project-specific passenger car fleet mix used in this analysis is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, and MDV vehicle types.

To determine emissions from trucks for the proposed industrial uses, the analysis incorporated the SCAQMD recommended truck trip length of 40 miles[7] and an assumption of 100% primary trips for the proposed industrial land uses.

Heavy trucks are broken down by truck type (or axle type) and are categorized as either Light-Heavy-Duty Trucks (LHDT1[8] & LHDT2 [9])/2-axle, Medium-Heavy-Duty Trucks (MHDT)/3-axle, and Heavy-Heavy-Duty Trucks (HHDT)/4+-axle. To account for emissions generated by trucks, the following fleet mix was utilized in this analysis:

TABLE 3-7: TRUCK FLEET MIX

Land Use	% Vehicle Type			
	LHDT1	LHDT2	MHDT	HHDT
High-Cube Transload Warehouse	13.73	3.66	19.57	63.04

Note: Project-specific truck fleet mix is based on the number of trips generated by each truck type (LHDT1, LHDT2, MHDT, and HHDT) relative to the total number of truck trips.

FUGITIVE DUST RELATED TO VEHICULAR TRAVEL

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of break and tire wear particulates. The emissions estimate for travel on paved roads were calculated using CalEEMod.

[5] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[6] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

[7] The average trip length for heavy trucks were based on the SCAQMD documents for the implementation of the Facility-Based Mobile Source Measures (FBMSMs) adopted in the 2016 AQMP. SCAQMD's "Preliminary Warehouse Emission Calculations" cites 39.9-mile trip length for heavy-heavy trucks (41). As a conservative measure, a trip length of 40 miles has been utilized for all trucks for the purpose of this analysis (39)

[8] Vehicles under the LHDT1 category have a GVWR of 8,501 to 10,000 lbs.

[9] Vehicles under the LHDT2 category have a GVWR of 10,001 to 14,000 lbs.

3.5.4 ON-SITE CARGO HANDLING EQUIPMENT EMISSIONS

It is common for warehouse buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this particular Project, on-site modeled operational equipment includes up to one (1) 200 horsepower (hp), compressed natural gas or gasoline-powered tractors/loaders/backhoes operating at 4 hours a day[10] for 365 days of the year.

3.5.5 OPERATIONAL EMISSIONS SUMMARY

CalEEMod utilizes summer and winter EMFAC2017 emission factors in order to derive vehicle emissions associated with Project operational activities, which vary by season. The estimated operational-source emissions are summarized on Tables 3-8. Detailed operation model outputs for the Project are presented in Appendix 3.2. As shown on Table 3-8, the Project's daily regional emissions from on-going operations will not exceed any of the thresholds of significance.

TABLE 3-8: SUMMARY OF PEAK OPERATIONAL EMISSIONS

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
Area Source	4.63	6.80E-04	0.08	1.00E-05	2.70E-04	2.70E-04
Energy Source	0.01	0.11	0.09	6.60E-04	8.34E-03	8.34E-03
Mobile Source	1.10	8.08	12.33	0.06	3.86	1.11
On-Site Equipment Source	0.11	1.04	0.75	3.17E-03	0.04	0.03
Total Maximum Daily Emissions	**5.86**	**9.22**	**13.25**	**0.07**	**3.91**	**1.16**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Winter						
Area Source	4.63	6.80E-04	0.08	1.00E-05	2.70E-04	2.70E-04
Energy Source	0.01	0.11	0.09	6.60E-04	8.34E-03	8.34E-03
Mobile Source	0.99	8.50	11.09	0.06	3.86	1.11
On-Site Equipment Source	0.11	1.04	0.75	3.17E-03	0.04	0.03
Total Maximum Daily Emissions	**5.74**	**9.64**	**12.01**	**0.06**	**3.91**	**1.16**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

[10] Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoe would operate up to 4 hours per day.

Source: CalEEMod operational-source emissions are presented in Appendix 3.2.

3.6 LOCALIZED SIGNIFICANCE

BACKGROUND ON LST DEVELOPMENT

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4[11]. LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses.

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the *LST Methodology* (36).

APPLICABILITY OF LSTS FOR THE PROJECT

For this Project, the appropriate SRA for the LST analysis is the SCAQMD Central San Bernardino Valley 1 (SRA 34). LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size.

In order to determine the appropriate methodology for determining localized impacts that could occur as a result of Project-related construction, the following process is undertaken:

- Identify the maximum daily on-site emissions that will occur during construction activity:
    - The maximum daily on-site emissions could be based on information provided by the Project Applicant; or
    - The SCAQMD's *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds* and CalEEMod User's Guide *Appendix A: Calculation Details for CalEEMod* can be used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod (37) (38).
- If the total acreage disturbed is less than or equal to 5 acres per day, then the SCAQMD's screening look-up tables are utilized to determine if a Project has the potential to result in a significant

[11] The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD defines Environmental Justice as "…equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

impact. The look-up tables establish a maximum daily emissions threshold in lbs/day that can be compared to CalEEMod outputs.

- If the total acreage disturbed is greater than 5 acres per day, then LST impacts may still be conservatively evaluated using the LST look-up tables for a 5-acre disturbance area. Use of the 5-acre disturbance area thresholds can be used to show that even if the daily emissions from all construction activity were emitted within a 5-acre area, and therefore concentrated over a smaller area which would result in greater site adjacent concentrations, the impacts would still be less than significant if the applicable 5-acre thresholds are utilized.
- The *LST Methodology* presents mass emission rates for each SRA, project sizes of 1, 2, and 5 acres, and nearest receptor distances of 25, 50, 100, 200, and 500 meters. For project sizes between the values given, or with receptors at distances between the given receptors, the methodology uses linear interpolation to determine the thresholds.

EMISSIONS CONSIDERED

Based on SCAQMD's *LST Methodology*, emissions for concern during construction activities are on-site NO_X, CO, $PM_{2.5}$, and PM_{10}. The *LST Methodology* clearly states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs (39)." As such, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered.

MAXIMUM DAILY DISTURBED-ACREAGE

As a conservative measure, it is assumed that 10 acres will be disturbed per day can be actively disturbed during construction of the site. In CalEEMod, the Total Acres Graded (TAG) field represents the cumulative distance traversed on the property by the grading equipment. In order to properly grade a piece of land, multiple passes with grading equipment may be required. So even though the lot size is a fixed number of acres, the TAG could be an order of magnitude higher than the footprint of the lot (38). Total Acres Graded (TAG) is a function of the maximum acreage disturbed per day times the number of days of the subphase of construction. As such, the TAG field in CalEEMod has been revised to 100 acres (10 acres per day x 10 days) for site preparation and 200 acres (10 acres per day x 20 days) for grading activities[12].

RECEPTORS

As previously stated, LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable NAAQS and CAAQS at the nearest residence or sensitive receptor. Receptor locations are off-site locations where individuals may be exposed to emissions from Project activities.

Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, and individuals with pre-existing respiratory or cardiovascular illness. Structures that house these persons or places where they gather are defined as "sensitive receptors". These structures typically include uses such as residences, hotels, and hospitals where an individual can remain

[12] CalEEMod does not provide a "Total Acres Graded" field for Demolition, Building Construction, Paving, or Architectural Coating activities.

for 24 hours. Consistent with the LST Methodology, the nearest land use where an individual could remain for 24 hours to the Project site (in this case the West Valley Detention Center) has been used to determine construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$, since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time.

LSTs apply, even for non-sensitive land uses, consistent with *LST Methodology* and SCAQMD guidance. Per the *LST Methodology*, commercial and industrial facilities are not included in the definition of sensitive receptor because employees and patrons do not typically remain onsite for a full 24 hours but are typically onsite for 8 hours or less. However, *LST Methodology* explicitly states that "*LSTs based on shorter averaging periods, such as the NO_2 and CO LSTs, could also be applied to receptors such as industrial or commercial facilities since it is reasonable to assume that a worker at these sites could be present for periods of one to eight hours* (39)." Therefore, any adjacent land use where an individual could remain for 1 or 8-hours, that is located at a closer distance to the Project site than the receptor used for PM_{10} and $PM_{2.5}$ analysis, must be considered to determine construction and operational LST air impacts for emissions of NO_2 and CO since these pollutants have an averaging time of 1 and 8-hours.

RECEPTORS

Receptors in the Project area are described below and shown on Exhibit 3-A. Localized air quality impacts were evaluated at receptor land uses nearest the Project site. All distances are measured from the Project site boundary to the outdoor living areas (e.g., backyards) or at the building façade, whichever is closer to the Project site.

R1: Location R1 represents Rialto Middle School located at 1262 West Rialto Avenue, approximately 1,447 feet north of the Project site.

R2: Location R2 represents Charlotte North Werner Elementary School located at 1050 West Rialto Avenue, approximately 1,565 feet northeast of the Project site.

R3: Location R3 represents the existing residence located at 504 South Quince Avenue, approximately 803 feet south of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receptor R3 is placed at the building façade.

R4: Location R4 represents the Calvary Chapel Rialto church located at 1391 West Merrill Avenue, approximately 834 feet southwest of the Project site.

R5: Location R5 represents the existing residence at 351 South Ironwood Avenue, approximately 1,417 feet west of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receptor R5 is placed at the building façade.

R6: Location R6 represents the Mission Metals wholesale facility at 1251 West Durst Drive, approximately 108 feet south of the Project site.

R7: Location R7 represents the Rialto Distribution Facility at 1110 West Merrill Avenue, approximately 108 feet east of the Project site.

EXHIBIT 3-A: SENSITIVE RECEPTOR LOCATIONS



The SCAQMD recommends that the nearest sensitive receptor be considered when determining the Project's potential to cause an individual a cumulatively significant impact. The nearest land use where an individual could remain for 24 hours to the Project site has been used to determine localized construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$ (since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time). The nearest receptor used for evaluation of localized impacts of PM_{10} and $PM_{2.5}$ is represented by the existing residence located at 503 South Quince Avenue, located approximately 801 feet (244 meters) south of the Project site.

As previously stated, and consistent with *LST Methodology*, the nearest industrial/commercial use to the Project site is used to determine construction and operational LST air impacts for emissions of NO_X and CO as the averaging periods for these pollutants are shorter (8 hours or less) and it is reasonable to assumed that an individual could be present at these sites for periods of one to 8 hours. The nearest receptor used for evaluation of localized impacts of NO_X and CO is represented by location R4 which represents the Mission Metals wholesale facility at 1251 West Durst Drive, approximately 108 feet (33 meters) south of the Project site. As such, for evaluation of localized NO_X and CO, a 33-meter distance will be used.

3.7 CONSTRUCTION-SOURCE EMISSIONS LST ANALYSIS

3.7.1 LOCALIZED THRESHOLDS FOR CONSTRUCTION ACTIVITY

Although the total acreage disturbed is more than 5 acres per day for construction activities, the *LST Methodology* provides look-up tables for sites with an area with daily disturbance of 5 acres or less. For projects that exceed 5 acres, the 5-acre LST look-up tables can be used as a screening tool to determine which pollutants require additional detailed analysis. This approach is conservative as it assumes that all on-site emissions associated with the Project would occur within a concentrated 5-acre area. This screening method would therefore over-predict potential localized impacts, because by assuming that on-site construction activities are occurring over a smaller area, the resulting concentrations of air pollutants are more highly concentrated once they reach the smaller site boundary than they would be for activities if they were spread out over a larger surface area. On a larger site, the same amount of air pollutants generated would disperse over a larger surface area and would result in a lower concentration once emissions reach the Project-site boundary. As such, LSTs for a 5-acre site during construction are used as a screening tool to determine if further detailed analysis is required. The thresholds used in for the construction-source LST analysis are presented below in Table 3-10.

TABLE 3-10: MAXIMUM DAILY LOCALIZED CONSTRUCTION EMISSIONS THRESHOLDS

Construction Phase	Construction Localized Thresholds			
	NO_X	CO	PM_{10}	PM_{10}
Demolition	280 lbs/day	1,954 lbs/day	124 lbs/day	47 lbs/day
Site Preparation				
Grading				

Source: Localized Thresholds presented in this table are based on the SCAQMD Final LST Methodology, July 2008

3.7.2 CONSTRUCTION-SOURCE LOCALIZED EMISSIONS

IMPACTS WITHOUT MITIGATION

Table 3-11 identifies the localized impacts at the nearest receptor location in the vicinity of the Project. Without mitigation, localized construction emissions would not exceed the applicable SCAQMD LSTs for emissions of any criterial pollutant. Outputs from the model runs for unmitigated construction LSTs are provided in Appendix 3.1.

TABLE 3-11: LOCALIZED CONSTRUCTION-SOURCE EMISSIONS – WITHOUT MITIGATION

Construction Phase	Year	Emissions (lbs/day)			
		NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition	2022	4.48	7.89	1.19	0.34
	Maximum Daily Emissions	**4.48**	**7.89**	**1.19**	**0.34**
	SCAQMD Localized Threshold	280	1,954	124	47
	Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
Site Preparation	2022	50.35	19.98	13.34	6.30
	Maximum Daily Emissions	**50.35**	**19.98**	**13.34**	**6.30**
	SCAQMD Localized Threshold	280	1,954	124	47
	Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
Grading	2022	50.00	25.04	8.48	3.55
	Maximum Daily Emissions	**50.00**	**25.04**	**8.48**	**3.55**
	SCAQMD Localized Threshold	280	1,954	124	47
	Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod unmitigated localized construction-source emissions are presented in Appendix 3.1.

3.8 OPERATIONAL-SOURCE EMISSIONS LST ANALYSIS

As noted previously, the *LST Methodology* provides look-up tables for sites with an area with daily disturbance of 5 acres or less. For projects that exceed 5 acres, the 5-acre LST look-up tables can be used as a screening tool to determine whether pollutants require additional detailed analysis. This approach is conservative as it assumes that all on-site emissions associated with the project would occur within a concentrated 5-acre area. This screening method would therefore over-predict potential localized impacts, because by assuming that on-site operational activities are occurring over a smaller area, the resulting concentrations of air pollutants are more highly concentrated once they reach the smaller site boundary than they would be for activities if they were spread out over a larger surface area. On a larger site, the same amount of air pollutants generated would disperse over a larger surface area and would result in a lower concentration once emissions reach the project-site boundary. As such, LSTs for a 5-acre site during operations are used as a screening tool to determine if further detailed analysis is required.

The LST analysis generally includes on-site sources (area, energy, mobile, and on-site cargo handling equipment – are previously discussed in Section 3.5 of this report). However, it should be noted that the CalEEMod outputs do not separate on-site and off-site emissions from mobile sources. As such, in an effort to establish a maximum potential impact scenario for analytic purposes, the emissions shown on Table 3-13 represent all on-site Project-related stationary (area) sources and 5% of the Project-related mobile sources. Considering that the trip length used in CalEEMod for the Project is approximately 16.6 miles for passenger cars and 40.0 miles for all trucks, 5% of this total would represent an on-site travel distance of approximately 0.8 mile/4,382 feet for passenger cars and 2 miles/10,560 feet for trucks. It should be noted that the longest on-site distance is roughly 0.5 miles for both trucks and passenger cars. As such, the 5% assumption is conservative and would tend to overstate the actual impact because it is not likely that a passenger car would drive 0.8 mile on the site or that a truck would drive 2 miles on the site. Modeling based on these assumptions demonstrates that even within broad encompassing parameters, Project operational-source emissions would not exceed applicable LSTs.

3.8.1 LOCALIZED THRESHOLDS FOR OPERATIONAL ACTIVITY

As previously stated, LSTs for a 5-acre site during operations are used as a screening tool to determine if further detailed analysis is required.

TABLE 3-12: MAXIMUM DAILY LOCAL IZED OPERATIONAL EMISSIONS THRESHOLDS

Operational Localized Thresholds			
NO_X	**CO**	**PM_{10}**	**PM_{10}**
280 lbs/day	1,954 lbs/day	30 lbs/day	12 lbs/day

Source: Localized Thresholds presented in this table are based on the SCAQMD Final LST Methodology, July 2008

3.8.2 OPERATIONAL-SOURCE LOCALIZED EMISSIONS

IMPACTS WITHOUT MITIGATION

As shown on Table 3-13 operational emissions would not exceed the LST thresholds and is therefore, considered to have a less than significant localized impact during operational activity.

TABLE 3-13: LOCALIZED SIGNIFICANCE SUMMARY OF OPERATIONS – WITHOUT MITIGATION

Scenario	Emissions (lbs/day)			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Summer	1.55	1.53	0.24	0.10
Winter	1.57	1.47	0.24	0.10
Maximum Daily Emissions	**1.57**	**1.53**	**0.24**	**0.10**
SCAQMD Localized Threshold	280	1,954	30	12
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod localized operational-source emissions are presented in Appendix 3.2.

3.9 CO "HOT SPOT" ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." Further, detailed modeling of Project-specific CO "hot spots" is not needed to reach this conclusion. An adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur.

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment. To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards, as shown on Table 3-14.

TABLE 3-14: CO MODEL RESULTS

Intersection Location	CO Concentrations (ppm)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire Boulevard/Veteran Avenue	4.6	3.5	4.2
Sunset Boulevard/Highland Avenue	4	4.5	3.9
La Cienega Boulevard/Century Boulevard	3.7	3.1	5.8
Long Beach Boulevard/Imperial Highway	3	3.1	9.3

Source: 2003 AQMP, Appendix V: Modeling and Attainment Demonstrations
Notes: Federal 1-hour standard is 35 ppm and the deferral 8-hour standard is 9.0 ppm.

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (*1992 CO Plan*), peak carbon monoxide concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, 8.4 ppm 8-hr CO concentration measured at the Long Beach Blvd. and Imperial Hwy. intersection (highest CO generating intersection within the "hot spot" analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 7.7 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared (40). In contrast, an adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. The ambient 1-hr and 8-hr CO concentration within the Project study area is estimated to be 1.7 ppm and 1.2 ppm, respectively (data from Central San Bernardino Valley 1 station for 2020). Therefore, even if the traffic volumes for the proposed Project were double or even triple of the traffic volumes generated at the Long Beach Blvd. and Imperial Hwy. intersection, coupled with

the on-going improvements in ambient air quality, the Project would not be capable of resulting in a CO "hot spot" at any study area intersections.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour (vph)—or 24,000 vph where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (41). Traffic volumes generating the CO concentrations for the "hot spot" analysis is shown on Table 3-15. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which has a daily traffic volume of approximately 100,000 vph and AM/PM traffic volumes of 8,062 vph and 7,719 vph respectively (40). The *2003 AQMP* estimated that the 1-hour concentration for this intersection was 4.6 ppm; this indicates that, should the daily traffic volume increase four times to 400,000 vehicles per day, CO concentrations (4.6 ppm x 4= 18.4 ppm) would still not likely exceed the most stringent 1-hour CO standard (20.0 ppm)[13].

TABLE 3-15: TRAFFIC VOLUMES

Intersection Location	Peak Traffic Volumes (vph)				
	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)	Total (AM/PM)
Wilshire Boulevard/Veteran Avenue	4,954/2,069	1,830/3,317	721/1,400	560/933	8,062/7,719
Sunset Boulevard/Highland Avenue	1,417/1,764	1,342/1,540	2,304/1,832	1,551/2,238	6,614/5,374
La Cienega Boulevard/Century Boulevard	2,540/2,243	1,890/2,728	1,384/2,029	821/1,674	6,634/8,674
Long Beach Boulevard/Imperial Highway	1,217/2,020	1,760/1,400	479/944	756/1,150	4,212/5,514

Source: 2003 AQMP

As summarized on Table 3-16 below, the intersection of Cedar Avenue and Interstate 10 (I-10) Eastbound would have the highest AM/PM traffic volumes of 5,546 vph and 5,282 vph, respectively. As such, Total traffic volumes at the intersections considered are less than the traffic volumes identified in the *2003 AQMP*. As such, the Project considered herein along with background and cumulative development would not produce the volume of traffic required to generate a CO "hot spot" either in the context of the 2003 Los Angeles hot spot study or based on representative BAAQMD CO threshold considerations. Therefore, CO "hot spots" are not an environmental impact of concern for the Project. Localized air quality impacts related to mobile-source emissions would therefore be less than significant.

[13] Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm)

TABLE 3-16: PEAK HOUR TRAFFIC VOLUMES

Intersection Location	Peak Traffic Volumes (vph)				
	Northbound (AM/PM)	Southbound (AM/PM)	Eastbound (AM/PM)	Westbound (AM/PM)	Total (AM/PM)
Cedar Avenue/Merrill Avenue	883/1,085	1,157/1,137	392/597	463/444	2,895/3,263
Cedar Avenue/Valley Boulevard	1,833/2,012	1,357/1,284	749/1,201	667/635	4,606/5,132
Cedar Avenue/I-10 Westbound	1,936/2,266	2,217/1,972	0/0	1,087/927	5,239/5,164
Cedar Avenue/I-10 Eastbound	2,013/2,438	2,249/1,825	1,283/1,019	0/0	5,546/5,282

Source: *Durst Drive Warehouse* (APN No. 1280-622-5, -6, -7) Traffic Analysis (Urban Crossroads, Inc., 2021)

3.10 AQMP

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the SCAG, county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards. AQMPs are updated regularly to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

In March 2017, the SCAQMD released the *Final 2016 AQMP* (*2016 AQMP*). The *2016 AQMP* continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels (42). Similar to the 2012 AQMP, the *2016 AQMP* incorporates scientific and technological information and planning assumptions, including the *2016-2040 RTP/SCS*, a planning document that supports the integration of land use and transportation to help the region meet the federal CAA requirements (18). The Project's consistency with the AQMP will be determined using the *2016 AQMP* as discussed below.

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the *1993 CEQA Handbook* (43). These indicators are discussed below:

3.10.1 CONSISTENCY CRITERION NO. 1

The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

The violations that Consistency Criterion No. 1 refers to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if regional or localized significance thresholds were exceeded.

Construction Impacts – Consistency Criterion 1

The violations that Consistency Criterion No. 1 refers to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if localized or regional significance thresholds were exceeded. The Project would not exceed the applicable regional or localized significance thresholds for emissions of any criteria pollutant. Therefore, the Project would not conflict with the AQMP according to this criterion.

Operational Impacts – Consistency Criterion 1

As evaluated, the Project would not exceed the applicable regional and localized significance thresholds for operational activity. Therefore, the Project would not conflict with the AQMP according to this criterion.

On the basis of the preceding discussion, the Project is determined to be consistent with the first criterion.

3.10.2 CONSISTENCY CRITERION NO. 2

The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

The *2016 AQMP* demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in City of Rialto General Plan is considered to be consistent with the AQMP***.***

Construction Impacts – Consistency Criterion 2

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities. As such, when considering that no emissions thresholds will be exceeded, a less than significant impact would result.

Operational Impacts – Consistency Criterion 2

As previously stated, the City of Rialto Land Use Map. As per the Land Use Map, the Project site is designated for Light Industrial uses. The Light Industrial land use designation allows for light industrial activity such as processing, packaging, machinery repair, fabrication, distribution, warehousing and storage, research and development, and similar uses which are low impact (4).

The Project is proposed to consist of a single 201,239 sf warehouse building, which is consistent with the City's designation and intensity. Additionally, the Project's construction and operational-source air pollutant emissions would not exceed the regional or localized significance thresholds.

On the basis of the preceding discussion, the Project is determined to be consistent with the second criterion.

AQMP CONSISTENCY CONCLUSION

The Project would not result in or cause NAAQS or CAAQS violations. The proposed Project is consistent with the land use and growth intensities reflected in the adopted General Plan. Furthermore, the Project would not exceed any applicable regional or local thresholds. As such, the Project is therefore considered to be consistent with the AQMP and a less than significant impact is expected.

3.11 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Results of the LST analysis indicate that the Project will not exceed the SCAQMD localized significance thresholds during construction. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during Project construction.

Additionally, the Project will not exceed the SCAQMD localized significance thresholds during operational activity. Further Project traffic would not create or result in a CO "hotspot." Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations as the result of Project operations.

3.11.1 FRIANT RANCH CASE

In December 2018, in the case of *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, the California Supreme Court held that an EIR air quality analysis must meaningfully connect the identified air quality impacts to the human health consequences of those impacts, or meaningfully explain why that analysis cannot be provided.

As discussed in briefs filed in the Friant Ranch case, correlating a project's criteria air pollutant emissions to specific health impacts is challenging. The SCAQMD, which has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, and thus it is uniquely situated to express an opinion on how lead agencies should correlate air quality impacts with specific health outcomes (44) noted that it may be "difficult to quantify health impacts for criteria pollutants." SCAQMD used O_3 as an example of why it is impracticable to determine specific health outcomes from criteria pollutants for all but very large, regional-scale projects. First, forming O_3 "takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources." (SCAQMD, 2015a, p. 11) Second, "it takes a large amount of additional precursor emissions (NO_X and VOCs) to cause a modeled increase in ambient ozone levels over an entire region," with a 2012 study showing that "reducing NO_X by 432 tons per day (157,680 tons/year) and reducing VOC by 187 tons per day (68,255 tons/year) would reduce

ozone levels at the SCAQMD's monitor site with the highest levels by only 9 parts per billion." (SCAQMD, 2015a, pp. 12-14)

SCAQMD concluded that it "does not currently know of a way to accurately quantify ozone-related health impacts caused by NO_X or VOC emissions from relatively small projects." (SCAQMD, 2015a, pp. 12-14) The San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) ties the difficulty of correlating the emission of criteria pollutants to health impacts to how ozone and particulate matter are formed, stating that "[b]ecause of the complexity of ozone formation, a specific tonnage amount of NO_X or VOCs emitted in a particular area does not equate to a particular concentration of ozone in that area." (SJVUAPCD, 2015, p. 4) Similarly, the tonnage of PM "emitted does not always equate to the local PM concentration because it can be transported long distances by wind," and "[s]econdary PM, like ozone, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur dioxides (SO_X) and NO_X," meaning that "the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area." (SJVUAPCD, 2015, p. 5) The disconnect between the amount of precursor pollutants and the concentration of ozone or PM formed makes it difficult to determine potential health impacts, which are related to the concentration of ozone and PM experienced by the receptor rather than levels of NO_X, SO_X, and VOCs produced by a source.

Most local agencies lack the data to do their own assessment of potential health impacts from criteria air pollutant emissions, as would be required to establish customized, locally specific thresholds of significance based on potential health impacts from an individual development project. The use of national or "generic" data to fill the gap of missing local data would not yield accurate results because such data does not capture local air patterns, local background conditions, or local population characteristics, all of which play a role in how a population experiences air pollution. Because it is impracticable to accurately isolate the exact cause of a human disease (for example, the role a particular air pollutant plays compared to the role of other allergens and genetics in cause asthma), existing scientific tools cannot accurately estimate health impacts of the Project's air emissions without undue speculation. Instead, readers are directed to the Project's air quality impact analysis above, which provides extensive information concerning the quantifiable and non-quantifiable health risks related to the Project's construction and long-term operation.

The LST analysis above determined that the Project would not result in emissions exceeding SCAQMD's LSTs. Therefore, the proposed Project would not be expected to exceed the most stringent applicable federal or state ambient air quality standards for emissions of CO, NO_X, PM_{10}, and $PM_{2.5}$.

As the Project's emissions will comply with federal, state, and local air quality standards, the proposed Project's emissions are not sufficiently high enough to use a regional modeling program to correlate health effects on a basin-wide level and would not provide a reliable indicator of health effects if modeled.

3.12 ODORS

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the proposed Project construction and operations would be less than significant and no mitigation is required (45).

3.13 CUMULATIVE IMPACTS

As previously shown in Table 2-3, the CAAQS designate the Project site as nonattainment for O_3 PM_{10}, and $PM_{2.5}$ while the NAAQS designates the Project site as nonattainment for O_3 and $PM_{2.5}$.

The SCAQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (46). In this report the SCAQMD clearly states (Page D-3):

> *"…the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for TAC emissions. The project specific (project increment) significance*

> *threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.*
>
> *Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."*

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which SCAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

CONSTRUCTION IMPACTS

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project construction-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, proposed Project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

OPERATIONAL IMPACTS

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project operational-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, proposed Project operational-source emissions would be considered less than significant on a project-specific and cumulative basis.

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4 REFERENCES

1. **State of California.** *2020 CEQA California Environmental Quality Act.* 2020.
2. **South Coast Air Quality Management District.** RULE 403. FUGITIVE DUST. [Online] https://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf?sfvrsn=4.
3. —. RULE 1113. Architectural Coatings. [Online] http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf.
4. **City of Rialto.** *City of Rialto General Plan.* 2010.
5. **South Coast Air Quality Management District.** Southern California Air Basins. [Online] https://www.arb.ca.gov/msprog/onroad/porttruck/maps/scabc7map.pdf.
6. —. *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning.* 2005.
7. **St. Croix Sensory, Inc.** *The "Gray Line" Between Odor Nuisance and Health Effects.* 2000.
8. **California Air Resources Board.** Ambient Air Quality Standards (AAQS). [Online] 2016. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.
9. **United State Environmental Protection Agency.** Frequent Questions about General Conformity . *EPA.* [Online] https://www.epa.gov/general-conformity/frequent-questions-about-general-conformity#8.
10. **South Coast Air Quality Management District.** Annual Air Quality Monitoring Network Plan. [Online] July 2018. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-monitoring-network-plan/annual-air-quality-monitoring-network-plan-v2.pdf?sfvrsn=2.
11. **Air Resources Board.** State and National Ambient Air Quality Standards. [Online] https://www.arb.ca.gov/regact/2019/statereadesignations/appc.pdf?_ga=2.169398369.1537615702.1554741141-1192937971.1505156621.
12. **District, South Coast Air Quality Management.** Air Quality Data Tables. [Online] https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year.
13. **Environmental Protection Agency.** National Ambient Air Quality Standards (NAAQS). [Online] 1990. https://www.epa.gov/environmental-topics/air-topics.
14. —. Air Pollution and the Clean Air Act. [Online] http://www.epa.gov/air/caa/.
15. **United States Environmental Protection Agency.** 1990 Clean Air Act Amendment Summary: Title I. [Online] https://www.epa.gov/clean-air-act-overview/1990-clean-air-act-amendment-summary-title-i.
16. —. 1990 Clean Air Act Amendment Summary: Title II. [Online] https://www.epa.gov/clean-air-act-overview/1990-clean-air-act-amendment-summary-title-ii.
17. **Air Resources Board.** California Ambient Air Quality Standards (CAAQS). [Online] 2009. [Cited: April 16, 2018.] http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm.
18. **Southern California Association of Governments.** 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy. [Online] April 2016. http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf.
19. **South Coast Air Quality Management District.** *Air Quality Management Plan.* 2012.
20. **California Air Resources Board.** *The California Almanac of Emissions and Air Quality.* 2013.
21. **South Coast AQMD.** South Coast Air Basin Ozone Trend. [Online] https://www.aqmd.gov/home/air-quality/historical-air-quality-data/historic-ozone-air-quality-trends.

22. **California Air Resources Board.** iADAM: Air Quality Data Statistics. *California Air Resources Board.* [Online] https://arb.ca.gov/adam/topfour/topfour1.php.

23. **Environmental Protection Agency.** Approval and Promulgation of Implementation Plans; California; South Coast Serious Area Plan for the 2006 PM2.5. [Online] 2019. https://www.federalregister.gov/documents/2019/02/12/2019-01922/approval-and-promulgation-of-implementation-plans-california-south-coast-serious-area-plan-for-the.

24. **South Coast Air Quality Management District.** Final 2016 Air Quality Management Plan. *South Coast Air Quality Management District.* [Online] March 2017. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf.

25. **South coast Air Quality Management District.** *CEQA Air Quality Handbook (1993).* 1993.

26. **California Environmental Protection Agency Air Resources Board.** Nitrogen Dioxide- Overview. [Online] http://www.arb.ca.gov/research/aaqs/caaqs/no2-1/no2-1.htm.

27. **Ralph Propper, Patrick Wong, Son Bui, Jeff Austin, William Vance, Alvaro Alvarado, Bart Croes, and Dongmin Luo.** Ambient and Emission Trends of Toxic Air Contaminants in California. *American Chemical Society: Environmental Science & Technology.* 2015.

28. **Air Resources Board.** ARB's Drayage Truck Regulatory Activities. [Online] http://www.arb.ca.gov/msprog/onroad/porttruck/porttruck.htm.

29. —. Truck and Bus Regulation. *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation.* [Online] http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.

30. **The Port of Los Angeles.** Clean Truck Program. [Online] http://www.portoflosangeles.org/ctp/idx_ctp.asp.

31. **South Coast Air Quality Management District.** Transfer Funds, Appropriate Funding, Execute Purchase Orders, Execute Contrat and Authorize Release of RFQs for the Fifth Multiple Air Toxics Exposure Study. *South Coast Air Quality Management District.* [Online] 2017. http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2017/2017-jul7-009.pdf?sfvrsn=7.

32. —. Executive Summary. *MATES V Draft Report.* [Online] 2021. http://www.aqmd.gov/docs/default-source/planning/mates-v/draft-mates-v-executive-summary_v2.pdf?sfvrsn=6.

33. **South Coast Air Quality Management District (SCAQMD).** SCAQMD Air Quality Significance Thresholds. [Online] http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2.

34. **California Air Pollution Control Officers Association (CAPCOA).** California Emissions Estimator Model (CalEEMod). [Online] September 2016. www.caleemod.com.

35. **Institute of Transportation Engineers.** *Trip Generation Manual.* 11th Edition. 2021.

36. **Lake Environmental.** US EPA Models. *Lake Environmental.* [Online] http://www.weblakes.com/download/us_epa.html.

37. **South Coast Air Quality Management District.** Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. [Online] http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf.

38. **California Air Pollution Control Officers Association (CAPCOA).** Appendix A: Calculation Details for CalEEMod. *CalEEMod.* [Online] October 2017. http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6.

39. **South Coast Air Quality Management District.** *Localized Significance Thresholds Methodology.* s.l. : South Coast Air Quality Managment District, 2008.

40. —. 2003 Air Quality Management Plan. [Online] 2003. https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/2003-aqmp.

41. **Bay Area Air Quality Management District.** [Online] http://www.baaqmd.gov/.

42. **South Coast Air Quality Management District.** Final 2016 Air Quality Management Plan (AQMP). [Online] March 2017. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=11.

43. **South coast Air Quality Management District.** *CEQA Air Quality Handbook (1993).* 1993.

44. **South Coast Air Quality Management District.** Sierra Club, Revive the San Joaquin and League of Women Voters of Fresno, Plaintiffs and Appellants, v. County of Fresno, Defendant and Respondent and, Friant Ranchm L.P. Real Party in Interest and Respondent. [Online] 2015. https://www.courts.ca.gov/documents/9-s219783-ac-south-coast-air-quality-mgt-dist-041315.pdf.

45. —. RULE 402 NUISANCE. [Online] http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-402.pdf.

46. **Goss, Tracy A and Kroeger, Amy.** White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. [Online] South Coast Air Quality Management District, 2003. http://www.aqmd.gov/rules/ciwg/final_white_paper.pdf.

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5 CERTIFICATIONS

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed Durst Drive Warehouse. The information contained in this air quality impact assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com

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EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

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University of California, Irvine • June, 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – CARB • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 2.1:

STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS

APPENDIX C

MAPS AND TABLES OF AREA DESIGNATIONS FOR STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS

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APPENDIX C

MAPS AND TABLES OF AREA DESIGNATIONS FOR STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS

This attachment fulfills the requirement of Health and Safety Code section 40718 for CARB to publish maps that identify areas where one or more violations of any State ambient air quality standard (State standard) or national ambient air quality standard (national standard) have been measured. The national standards are those promulgated under section 109 of the federal Clean Air Act (42 U.S.C. 7409).

This attachment is divided into three parts. The first part comprises a table showing the levels, averaging times, and measurement methods for each of the State and national standards. This is followed by a section containing maps and tables showing the area designations for each pollutant for which there is a State standard in the California Code of Regulations, title 17, section 70200. The last section contains maps and tables showing the most current area designations for the national standards.

Ambient Air Quality Standards

(Updated 5/4/16)

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³	15 µg/m³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³ (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m³		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	**No National Standards**		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

See footnotes on next page ...

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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Area Designations for the State Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a State standard set forth in the California Code of Regulations, title 17, section 60200. Each area is identified as attainment, nonattainment, nonattainment-transitional, or unclassified for each pollutant, as shown below:

Attainment	A
Nonattainment	N
Nonattainment-Transitional	NA-T
Unclassified	U

In general, CARB designates areas by air basin for pollutants with a regional impact and by county for pollutants with a more local impact. However, when there are areas within an air basin or county with distinctly different air quality deriving from sources and conditions not affecting the entire air basin or county, CARB may designate a smaller area. Generally, when boundaries of the designated area differ from the air basin or county boundaries, the description of the specific area is referenced at the bottom of the summary table.

FIGURE 1


2018
Area Designations for State
Ambient Air Quality Standards
OZONE
N
0
50
100
200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Shasta
Lassen
Humboldt
Trinity
Tehema
SACRAMENTO VALLEY
SUTTER BUTTES
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Placer
Lake
Sutter
LAKE TAHOE
El Dorado
Yolo
Alpine
Sonoma
Napa
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
San Joaquin
Contra Costa
Tuolumne
Mono
San Francisco
Alameda
Mariposa
GREAT BASIN VALLEYS
San Mateo
Stanislaus
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Orange
Riverside
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
SALTON SEA
Unclassified
Attainment
Nonattainment-Transitional
Nonattainment
Air Basin
County
Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 1

California Ambient Air Quality Standards
Area Designations for Ozone [1]

	N	NA-T	U	A		N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN					NORTHEAST PLATEAU AIR BASIN				X
Alpine County			X		SACRAMENTO VALLEY AIR BASIN				
Inyo County	X				Colusa and Glenn Counties				X
Mono County	X				Sutter/Yuba Counties				
LAKE COUNTY AIR BASIN				X	Sutter Buttes	X			
LAKE TAHOE AIR BASIN				X	Remainder of Sutter County				X
MOJAVE DESERT AIR BASIN	X				Yuba County				X
MOUNTAIN COUNTIES AIR BASIN					Yolo/Solano Counties		X		
Amador County	X				Remainder of Air Basin	X			
Calaveras County	X				SALTON SEA AIR BASIN	X			
El Dorado County (portion)	X				SAN DIEGO AIR BASIN	X			
Mariposa County	X				SAN FRANCISCO BAY AREA AIR BASIN	X			
Nevada County	X				SAN JOAQUIN VALLEY AIR BASIN	X			
Placer County (portion)	X				SOUTH CENTRAL COAST AIR BASIN				
Plumas County			X		San Luis Obispo County	X			
Sierra County			X		Santa Barbara County		X		
Tuolumne County	X				Ventura County	X			
NORTH CENTRAL COAST AIR BASIN		X			SOUTH COAST AIR BASIN	X			
NORTH COAST AIR BASIN				X					

(1) AB 3048 (Olberg) and AB 2525 (Miller) signed into law in 1996, made changes to Health and Safety Code, section 40925.5. One of the changes allows nonattainment districts to become nonattainment-transitional for ozone by operation of law.

FIGURE 2

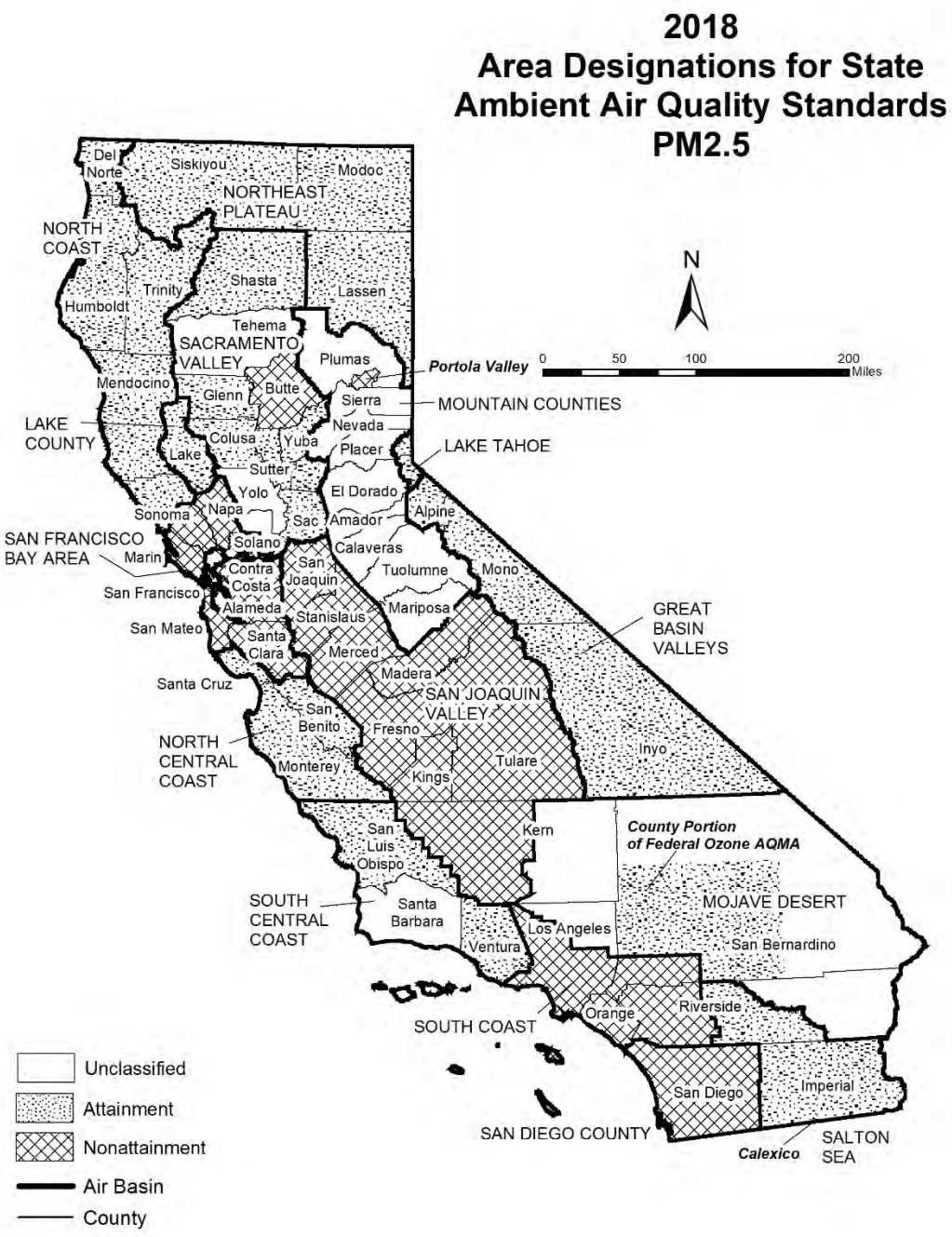

2018
Area Designations for State
Ambient Air Quality Standards
PM10
N
0
50
100
200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehema
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
LAKE COUNTY
Colusa
Yuba
Nevada
Lake
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
Yosemite NP
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
San Francisco
Alameda
Stanislaus
Mariposa
GREAT BASIN VALLEYS
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Monterey
Tulare
Inyo
Kings
San Luis Obispo
Kern
MOJAVE DESERT
Santa Barbara
Los Angeles
San Bernardino
SOUTH CENTRAL COAST
Ventura
Orange
Riverside
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
SALTON SEA
Unclassified
Attainment
Nonattainment
Air Basin
County
Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 2

California Ambient Air Quality Standards
Area Designation for Suspended Particulate Matter (PM10)

	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN	X			NORTH CENTRAL COAST AIR BASIN	X		
LAKE COUNTY AIR BASIN			X	NORTH COAST AIR BASIN			
LAKE TAHOE AIR BASIN	X			Del Norte, Sonoma (portion) and Trinity Counties			X
MOJAVE DESERT AIR BASIN	X			Remainder of Air Basin	X		
MOUNTAIN COUNTIES AIR BASIN				NORTHEAST PLATEAU AIR BASIN			
Amador County		X		Siskiyou County			X
Calaveras County	X			Remainder of Air Basin		X	
El Dorado County (portion)	X			SACRAMENTO VALLEY AIR BASIN			
Mariposa County				Shasta County			X
- Yosemite National Park	X			Remainder of Air Basin	X		
- Remainder of County		X		SALTON SEA AIR BASIN	X		
Nevada County	X			SAN DIEGO AIR BASIN	X		
Placer County (portion)	X			SAN FRANCISCO BAY AREA AIR BASIN	X		
Plumas County	X			SAN JOAQUIN VALLEY AIR BASIN	X		
Sierra County	X			SOUTH CENTRAL COAST AIR BASIN	X		
Tuolumne County		X		SOUTH COAST AIR BASIN	X		

FIGURE 3



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 3

California Ambient Air Quality Standards
Area Designations for Fine Particulate Matter (PM2.5)

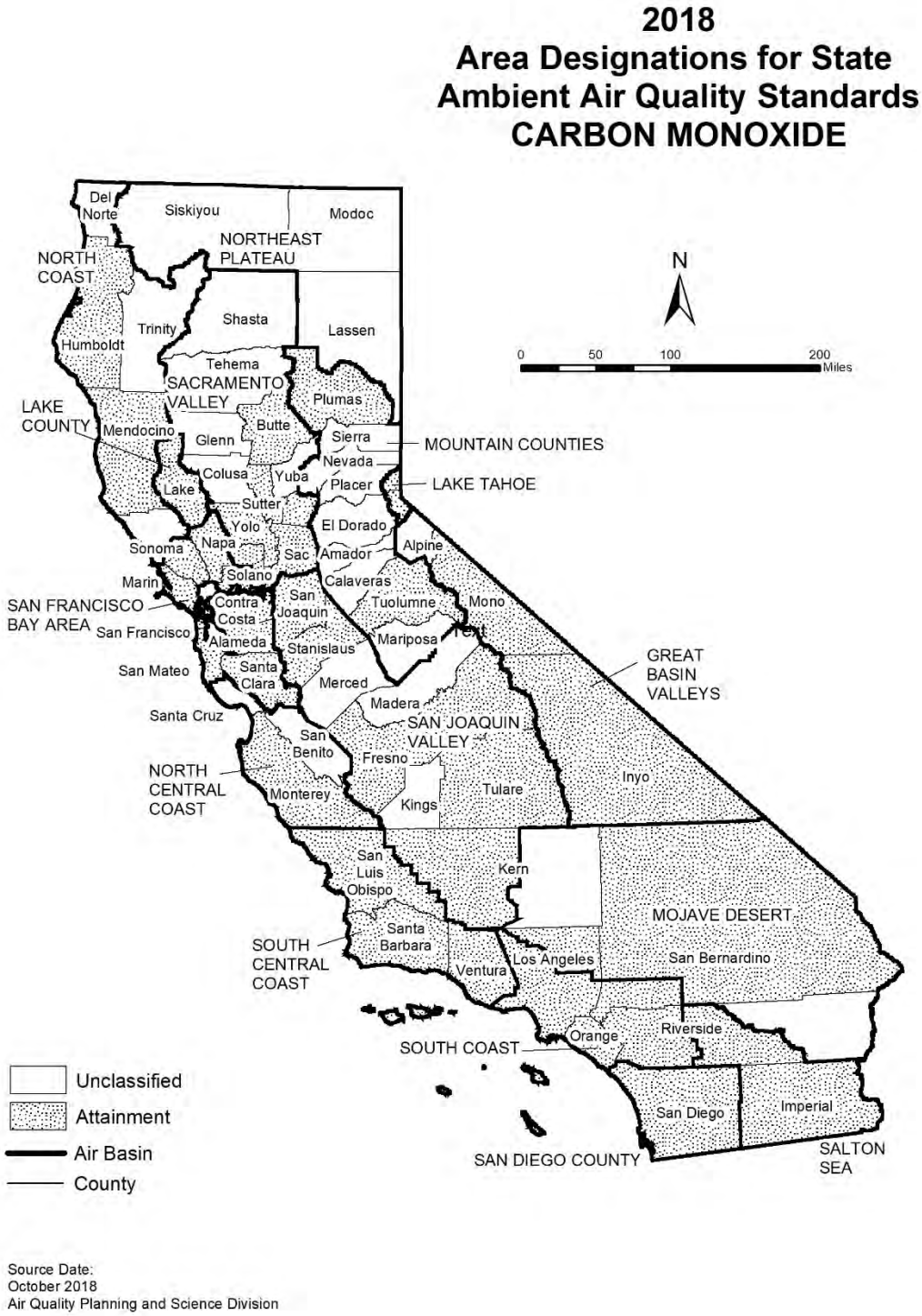
	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN			X	SALTON SEA AIR BASIN			
LAKE COUNTY AIR BASIN			X	Imperial County			
LAKE TAHOE AIR BASIN			X	- City of Calexico (3)	X		
MOJAVE DESERT AIR BASIN				Remainder of Air Basin			X
San Bernardino County				SAN DIEGO AIR BASIN	X		
- County portion of federal Southeast Desert Modified AQMA for Ozone (1)			X	SAN FRANCISCO BAY AREA AIR BASIN	X		
				SAN JOAQUIN VALLEY AIR BASIN	X		
Remainder of Air Basin		X		SOUTH CENTRAL COAST AIR BASIN			
MOUNTAIN COUNTIES AIR BASIN				San Luis Obispo County			X
Plumas County				Santa Barbara County		X	
- Portola Valley (2)	X			Ventura County			X
Remainder of Air Basin		X		SOUTH COAST AIR BASIN	X		
NORTH CENTRAL COAST AIR BASIN			X				
NORTH COAST AIR BASIN			X				
NORTHEAST PLATEAU AIR BASIN			X				
SACRAMENTO VALLEY AIR BASIN							
Butte County	X						
Colusa County			X				
Glenn County			X				
Placer County (portion)			X				
Sacramento County			X				
Shasta County			X				
Sutter and Yuba Counties			X				
Remainder of Air Basin		X					

(1) California Code of Regulations, title 17, section 60200(b)

(2) California Code of Regulations, title 17, section 60200(c)

(3) California Code of Regulations, title 17, section 60200(a)

FIGURE 4



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 4

California Ambient Air Quality Standards
Area Designation for Carbon Monoxide*

	N	NA-T	U	A		N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN					SACRAMENTO VALLEY AIR BASIN				
Alpine County			X		Butte County				X
Inyo County				X	Colusa County			X	
Mono County				X	Glenn County			X	
LAKE COUNTY AIR BASIN				X	Placer County (portion)				X
LAKE TAHOE AIR BASIN				X	Sacramento County				X
MOJAVE DESERT AIR BASIN					Shasta County			X	
Kern County (portion)			X		Solano County (portion)				X
Los Angeles County (portion)				X	Sutter County				X
Riverside County (portion)			X		Tehama County			X	
San Bernardino County (portion)				X	Yolo County				X
MOUNTAIN COUNTIES AIR BASIN					Yuba County			X	
Amador County			X		SALTON SEA AIR BASIN				X
Calaveras County			X		SAN DIEGO AIR BASIN				X
El Dorado County (portion)			X		SAN FRANCISCO BAY AREA AIR BASIN				X
Mariposa County			X		SAN JOAQUIN VALLEY AIR BASIN				
Nevada County			X		Fresno County				X
Placer County (portion)			X		Kern County (portion)				X
Plumas County				X	Kings County			X	
Sierra County			X		Madera County			X	
Tuolumne County				X	Merced County			X	
NORTH CENTRAL COAST AIR BASIN					San Joaquin County				X
Monterey County				X	Stanislaus County				X
San Benito County			X		Tulare County				X
Santa Cruz County			X		SOUTH CENTRAL COAST AIR BASIN				X
NORTH COAST AIR BASIN					SOUTH COAST AIR BASIN				X
Del Norte County			X						
Humboldt County				X					
Mendocino County				X					
Sonoma County (portion)			X						
Trinity County			X						
NORTHEAST PLATEAU AIR BASIN			X						

* The area designated for carbon monoxide is a county or portion of a county

FIGURE 5



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 5

California Ambient Air Quality Standards
Area Designation for Nitrogen Dioxide

	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN			X	SACRAMENTO VALLEY AIR BASIN			X
LAKE COUNTY AIR BASIN			X	SALTON SEA AIR BASIN			X
LAKE TAHOE AIR BASIN			X	SAN DIEGO AIR BASIN			X
MOJAVE DESERT AIR BASIN			X	SAN FRANCISCO BAY AREA AIR BASIN			X
MOUNTAIN COUNTIES AIR BASIN			X	SAN JOAQUIN VALLEY AIR BASIN			X
NORTH CENTRAL COAST AIR BASIN			X	SOUTH CENTRAL COAST AIR BASIN			X
NORTH COAST AIR BASIN			X	SOUTH COAST AIR BASIN			
NORTHEAST PLATEAU AIR BASIN			X	CA 60 Near-road Portion of San Bernardino, Riverside, and Los Angeles Counties	X		
				Remainder of Air Basin			X

FIGURE 6



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 6

California Ambient Air Quality Standards
Area Designation for Sulfur Dioxide*

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SACRAMENTO VALLEY AIR BASIN		X
LAKE COUNTY AIR BASIN		X	SALTON SEA AIR BASIN		X
LAKE TAHOE AIR BASIN		X	SAN DIEGO AIR BASIN		X
MOJAVE DESERT AIR BASIN		X	SAN FRANCISCO BAY AREA AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X	SOUTH CENTRAL COAST AIR BASIN		X
NORTH COAST AIR BASIN		X	SOUTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X			

* The area designated for sulfur dioxide is a county or portion of a county

FIGURE 7



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 7

California Ambient Air Quality Standards
Area Designation for Sulfates

	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN			X	SACRAMENTO VALLEY AIR BASIN			X
LAKE COUNTY AIR BASIN			X	SALTON SEA AIR BASIN			X
LAKE TAHOE AIR BASIN			X	SAN DIEGO AIR BASIN			X
MOJAVE DESERT AIR BASIN			X	SAN FRANCISCO BAY AREA AIR BASIN			X
MOUNTAIN COUNTIES AIR BASIN			X	SAN JOAQUIN VALLEY AIR BASIN			X
NORTH CENTRAL COAST AIR BASIN			X	SOUTH CENTRAL COAST AIR BASIN			X
NORTH COAST AIR BASIN			X	SOUTH COAST AIR BASIN			X
NORTHEAST PLATEAU AIR BASIN			X				

FIGURE 8



Source Date:
October 2018
Air Quality Planning and Science Division

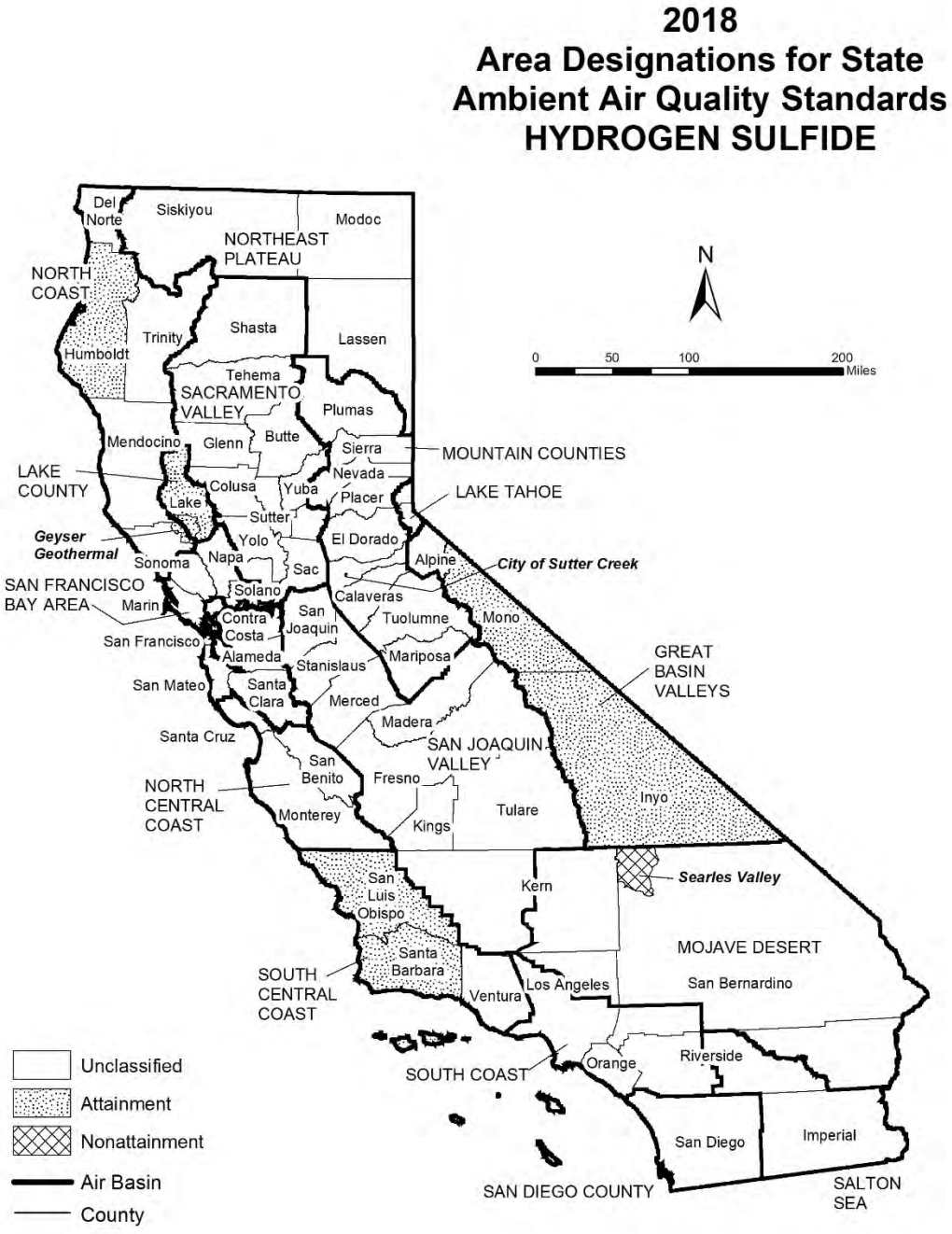
TABLE 8

California Ambient Air Quality Standards
Area Designations for Lead (particulate)*

	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN			X	SALTON SEA AIR BASIN			X
LAKE COUNTY AIR BASIN			X	SAN DIEGO AIR BASIN			X
LAKE TAHOE AIR BASIN			X	SAN FRANCISCO BAY AREA AIR BASIN			X
MOJAVE DESERT AIR BASIN			X	SAN JOAQUIN VALLEY AIR BASIN			X
MOUNTAIN COUNTIES AIR BASIN			X	SOUTH CENTRAL COAST AIR BASIN			X
NORTH CENTRAL COAST AIR BASIN			X	SOUTH COAST AIR BASIN			X
NORTH COAST AIR BASIN			X				
NORTHEAST PLATEAU AIR BASIN			X				
SACRAMENTO VALLEY AIR BASIN			X				

* The area designated for lead is a county or portion of a county. Since all areas in the State are in attainment for this standard, air basins are indicated here for simplicity.

FIGURE 9



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 9

California Ambient Air Quality Standards
Area Designation for Hydrogen Sulfide*

	N	NA-T	U	A		N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN					NORTH CENTRAL COAST AIR BASIN			X	
Alpine County			X		NORTH COAST AIR BASIN				
Inyo County				X	Del Norte County			X	
Mono County				X	Humboldt County				X
LAKE COUNTY AIR BASIN				X	Mendocino County			X	
LAKE TAHOE AIR BASIN			X		Sonoma County (portion)				
MOJAVE DESERT AIR BASIN					- Geyser Geothermal Area (2)				X
Kern County (portion)			X		- Remainder of County			X	
Los Angeles County (portion)			X		Trinity County			X	
Riverside County (portion)			X		NORTHEAST PLATEAU AIR BASIN			X	
San Bernardino County (portion)					SACRAMENTO VALLEY AIR BASIN			X	
- Searles Valley Planning Area (1)	X				SALTON SEA AIR BASIN			X	
- Remainder of County			X		SAN DIEGO AIR BASIN			X	
MOUNTAIN COUNTIES AIR BASIN					SAN FRANCISCO BAY AREA AIR BASIN			X	
Amador County					SAN JOAQUIN VALLEY AIR BASIN			X	
- City of Sutter Creek	X				SOUTH CENTRAL COAST AIR BASIN				
- Remainder of County			X		San Luis Obispo County				X
Calaveras County			X		Santa Barbara County				X
El Dorado County (portion)			X		Ventura County			X	
Mariposa County			X		SOUTH COAST AIR BASIN			X	
Nevada County			X						
Placer County (portion)			X						
Plumas County			X						
Sierra County			X						
Tuolumne County			X						

* The area designated for hydrogen sulfide is a county or portion of a county

(1) 52 Federal Register 29384 (August 7, 1987)

(2) California Code of Regulations, title 17, section 60200(d)

FIGURE 10



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 10

California Ambient Air Quality Standards
Area Designation for Visibility Reducing Particles

	N	NA-T	U	A		N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN			X		SACRAMENTO VALLEY AIR BASIN			X	
LAKE COUNTY AIR BASIN				X	SALTON SEA AIR BASIN			X	
LAKE TAHOE AIR BASIN			X		SAN DIEGO AIR BASIN			X	
MOJAVE DESERT AIR BASIN			X		SAN FRANCISCO BAY AREA AIR BASIN			X	
MOUNTAIN COUNTIES AIR BASIN			X		SAN JOAQUIN VALLEY AIR BASIN			X	
NORTH CENTRAL COAST AIR BASIN			X		SOUTH CENTRAL COAST AIR BASIN			X	
NORTH COAST AIR BASIN			X		SOUTH COAST AIR BASIN			X	
NORTHEAST PLATEAU AIR BASIN			X						

Area Designations for the National Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a national ambient air quality standard. Additional information about the federal area designations is available on the U.S. EPA website:

https://www.epa.gov/green-book

Over the last several years, U.S. EPA has been reviewing the levels of the various national standards. The agency has already promulgated new standard levels for some pollutants and is considering revising the levels for others. Information about the status of these reviews is available on the U.S. EPA website:

https://www.epa.gov/criteria-air-pollutants

Designation Categories

Suspended Particulate Matter (PM_{10}). The U.S. EPA uses three categories to designate areas with respect to PM_{10}:

- Attainment
- Nonattainment
- Unclassifiable

Ozone, Fine Suspended Particulate Matter ($PM_{2.5}$), Carbon Monoxide (CO), and Nitrogen Dioxide (NO_2). The U.S. EPA uses two categories to designate areas with respect to these standards:

- Nonattainment
- Unclassifiable/Attainment

The national 1-hour ozone standard was revoked effective June 15, 2005, and the area designations map reflects the 2015 national 8-hour ozone standard of 0.070 ppm. Original designations were finalized on August 3, 2018.

On December 14, 2012, the U.S. EPA established a new national annual primary $PM_{2.5}$ standard of 12.0 $\mu g/m^3$. New area designations reflecting this revised standard became final in December 2014. The current designation map reflects the most recently revised (2012) annual average standard of 12.0 $\mu g/m^3$ as well as the 24-hour standard of 35 $\mu g/m^3$, revised in 2006.

On January 22, 2010, the U.S. EPA established a new national 1-hour NO_2 standard of 100 parts per billion (ppb) and retained the annual average standard of 53 ppb. Designations for the primary NO_2 standard became effective on February 29, 2012. All areas of California meet this standard.

Sulfur Dioxide (SO_2). The U.S. EPA uses three categories to designate areas with respect to the 24-hour and annual average sulfur dioxide standards. These designation categories are:

- Nonattainment,
- Unclassifiable, and
- Attainment/Unclassifiable.

On June 2, 2010, the U.S. EPA established a new primary 1-hour SO_2 standard of 75 parts per billion (ppb). At the same time, U.S. EPA revoked the 24-hour and annual

average standards. Area designations for the 1-hour SO_2 standard were finalized on December 21, 2017 and are reflected in the area designations map.

Lead (particulate). The U.S. EPA promulgated a new rolling 3-month average lead standard in October 2008 of 0.15 µg/m^3. Designations were made for this standard in November 2010.

Designation Areas

From time to time, the boundaries of the California air basins have been changed to facilitate the planning process. CARB generally initiates these changes, and they are not always reflected in the U.S. EPA's area designations. For purposes of consistency, the maps in this attachment reflect area designation boundaries and nomenclature as promulgated by the U.S. EPA. In some cases, these may not be the same as those adopted by CARB. For example, the national area designations reflect the former Southeast Desert Air Basin. In accordance with Health and Safety Code section 39606.1, CARB redefined this area in 1996 to be the Mojave Desert Air Basin and Salton Sea Air Basin. The definitions and boundaries for all areas designated for the national standards can be found in Title 40, Code of Federal Regulations (CFR), Chapter I, Subchapter C, Part 81.305. They are available on the web at:

https://ecfr.io/Title-40/se40.20.81_1305

FIGURE 11

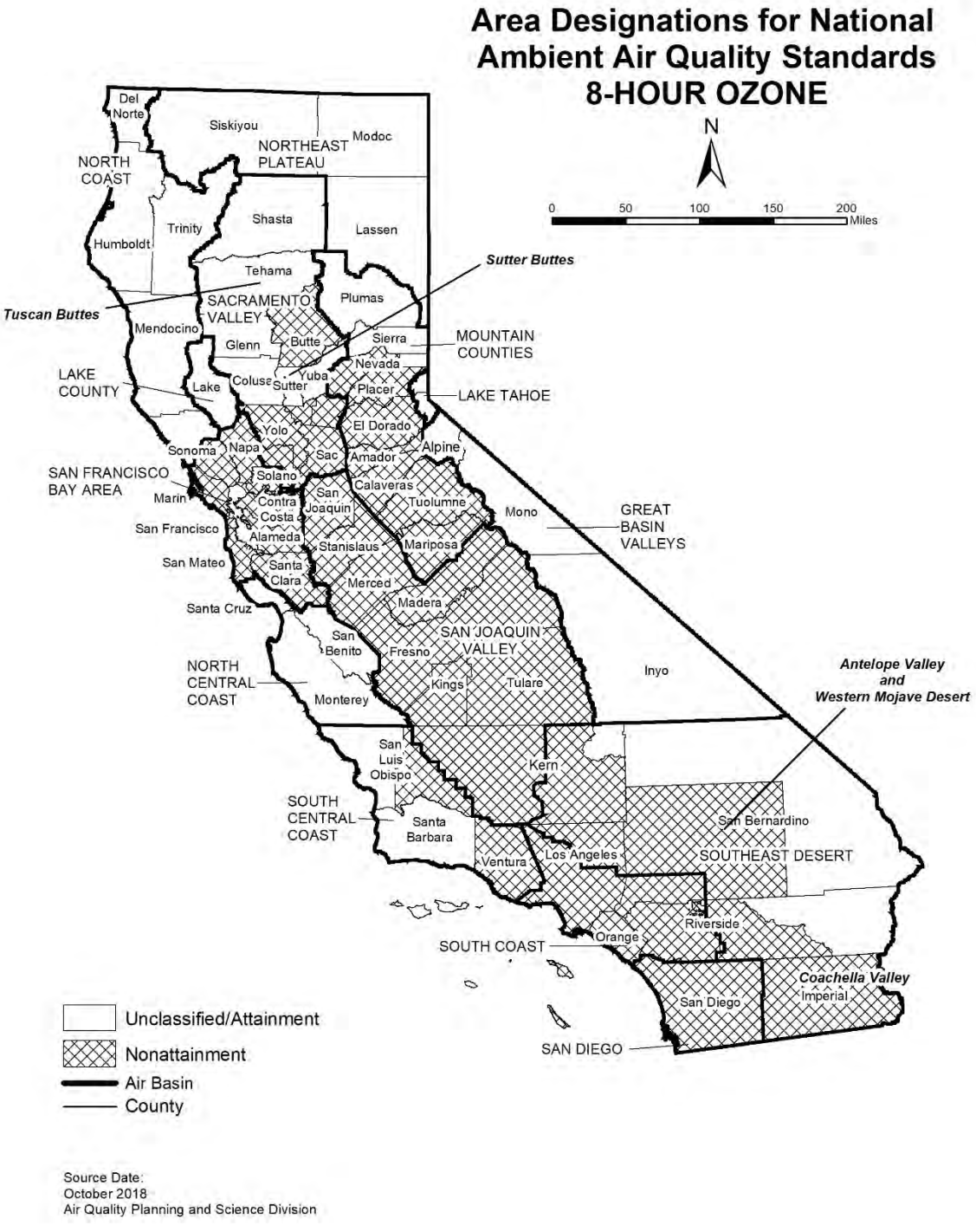

Area Designations for National Ambient Air Quality Standards
8-HOUR OZONE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
Sutter Buttes
Tuscan Buttes
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Sutter
Yuba
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Marin
Contra Costa
San Joaquin
Calaveras
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
SAN JOAQUIN VALLEY
Fresno
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Antelope Valley and Western Mojave Desert
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
SOUTHEAST DESERT
Riverside
Orange
SOUTH COAST
Coachella Valley
Imperial
San Diego
SAN DIEGO
Unclassified/Attainment
Nonattainment
Air Basin
County
Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 11

National Ambient Air Quality Standards
Area Designations for 8-Hour Ozone*

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SACRAMENTO VALLEY AIR BASIN (cont.)		
LAKE COUNTY AIR BASIN		X	Yolo County (2)	X	
LAKE TAHOE AIR BASIN		X	Yuba County		X
MOUNTAIN COUNTIES AIR BASIN			SAN DIEGO COUNTY	X	
Amador County	X		SAN FRANCISCO BAY AREA AIR BASIN	X	
Calaveras County	X		SAN JOAQUIN VALLEY AIR BASIN	X	
El Dorado County (portion) (2)	X		SOUTH CENTRAL COAST AIR BASIN (1)		
Mariposa County	X		San Luis Obispo County		
Nevada County			- Eastern San Luis Obispo County	X	
- Western Nevada County	X		- Remainder of County		X
- Remainder of County		X	Santa Barbara County		X
Placer County (portion) (2)	X		Ventura County		
Plumas County		X	- Area excluding Anacapa and San Nicolas Islands	X	
Sierra County		X	- Channel Islands (1)		X
Tuolumne County	X		SOUTH COAST AIR BASIN (1)	X	
NORTH CENTRAL COAST AIR BASIN		X	SOUTHEAST DESERT AIR BASIN		
NORTH COAST AIR BASIN		X	Kern County (portion)	X	
NORTHEAST PLATEAU AIR BASIN		X	- Indian Wells Valley		X
SACRAMENTO VALLEY AIR BASIN			Imperial County	X	
Butte County	X		Los Angeles County (portion)	X	
Colusa County		X	Riverside County (portion)		
Glenn County		X	- Coachella Valley	X	
Sacramento Metro Area (2)	X		- Non-AQMA portion		X
Shasta County		X	San Bernardino County		
Sutter County			- Western portion (AQMA)	X	
- Sutter Buttes	X		- Eastern portion (non-AQMA)		X
- Southern portion of Sutter County (2)	X				
- Remainder of Sutter County		X			
Tehama County					
- Tuscan Buttes	X				
- Remainder of Tehama County		X			

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

NOTE: This map and table reflect the 2015 8-hour ozone standard of 0.070 ppm.

(1) South Central Coast Air Basin Channel Islands:
Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.
Ventura County includes Anacapa and San Nicolas Islands.

South Coast Air Basin:
Los Angeles County includes San Clemente and Santa Catalina Islands.

(2) For this purpose, the Sacramento Metro Area comprises all of Sacramento and Yolo Counties, the Sacramento Valley Air Basin portion of Solano County, the southern portion of Sutter County, and the Sacramento Valley and Mountain Counties Air Basins portions of Placer and El Dorado counties.

FIGURE 12


Area Designations for National Ambient Air Quality Standards PM10
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Shasta
Lassen
Trinity
Humboldt
Tehema
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Placer
LAKE TAHOE
Lake
Sutter
Yolo
El Dorado
Alpine
Sacramento County
Sonoma
Napa
Sac
Amador
Mono
Mono Basin
SAN FRANCISCO BAY AREA
Marin
Solano
Calaveras
Contra Costa
San Joaquin
Tuolumne
Mammoth Lake
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Inyo
Santa Cruz
San Benito
Fresno
SAN JOAQUIN VALLEY
Owens Valley
Coso Junction
Trona
NORTH CENTRAL COAST
Monterey
Kings
Tulare
San Luis Obispo
Kern
Indian Wells Valley
San Bernardino
SOUTH CENTRAL COAST
Santa Barbara
Ventura
Los Angeles
SOUTHEAST DESERT
Riverside
Coachella Valley
Orange
SOUTH COAST
Imperial
San Diego
SAN DIEGO COUNTY
Unclassified
Attainment
Nonattainment
Air Basin
County
Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 12

National Ambient Air Quality Standards
Area Designations for Suspended Particulate Matter (PM10)*

	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN				SAN DIEGO COUNTY		X	
Alpine County		X		SAN FRANCISCO BAY AREA AIR BASIN		X	
Inyo County				SAN JOAQUIN VALLEY AIR BASIN			X
- Owens Valley Planning Area	X			SOUTH CENTRAL COAST AIR BASIN		X	
- Coso Junction			X	SOUTH COAST AIR BASIN			X
- Remainder of County		X		SOUTHEAST DESERT AIR BASIN			
Mono County				Eastern Kern County			
- Mammoth Lake Planning Area			X	- Indian Wells Valley			X
- Mono Lake Basin	X			- Portion within San Joaquin Valley Planning Area	X		
- Remainder of County		X		- Remainder of County		X	
LAKE COUNTY AIR BASIN		X		Imperial County			
LAKE TAHOE AIR BASIN		X		- Imperial Valley Planning Area	X		
MOUNTAIN COUNTIES AIR BASIN				- Remainder of County		X	
Placer County (portion) (2)		X		Los Angeles County (portion)		X	
Remainder of Air Basin		X		Riverside County (portion)			
NORTH CENTRAL COAST AIR BASIN		X		- Coachella Valley (3)	X		
NORTH COAST AIR BASIN		X		- Non-AQMA portion		X	
NORTHEAST PLATEAU AIR BASIN		X		San Bernardino County			
SACRAMENTO VALLEY AIR BASIN				- Trona	X		
Butte County		X		- Remainder of County	X		
Colusa County		X					
Glenn County		X					
Placer County (portion) (2)		X					
Sacramento County (1)			X				
Shasta County		X					
Solano County (portion)		X					
Sutter County		X					
Tehama County		X					
Yolo County		X					
Yuba County		X					

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.
(1) Air quality in Sacramento County meets the national PM10 standards. The request for redesignation to attainment was approved by U.S. EPA in September 2013.
(2) U.S. EPA designation puts the Sacramento Valley Air Basin portion of Placer County in the Mountain Counties Air Basin.
(3) Air quality in Coachella Valley meets the national PM10 standards. A request for redesignation to attainment has been submitted to U.S. EPA.

FIGURE 13


Area Designations for National Ambient Air Quality Standards PM2.5
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTH COAST
NORTHEAST PLATEAU
Humboldt
Trinity
Shasta
Lassen
Tehama
SACRAMENTO VALLEY
Plumas
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Mendocino
Nevada
LAKE COUNTY
Colusa
Yuba
Placer
Lake
Sutter
LAKE TAHOE
El Dorado
Yolo
Sonoma
Napa
Sacramento
Alpine
Amador
Solano
Calaveras
SAN FRANCISCO BAY AREA
Marin
Tuolumne
GREAT BASIN VALLEYS
Contra Costa
San Joaquin
Mono
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
Fresno
NORTH CENTRAL COAST
San Benito
SAN JOAQUIN VALLEY
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
SOUTHEAST DESERT
Ventura
Los Angeles
Orange
Riverside
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Nonattainment
Air Basin
County
Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 13

National Ambient Air Quality Standards
Area Designations for Fine Particulate Matter (PM2.5)*

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SAN DIEGO COUNTY		X
LAKE COUNTY AIR BASIN		X	SAN FRANCISCO BAY AREA AIR BASIN (2)	X	
LAKE TAHOE AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN	X	
MOUNTAIN COUNTIES AIR BASIN			SOUTH CENTRAL COAST AIR BASIN		X
Plumas County			SOUTH COAST AIR BASIN (3)	X	
- Portola Valley Portion of Plumas	X		SOUTHEAST DESERT AIR BASIN		
- Remainder of Plumas County		X	Imperial County (portion) (4)	X	
Remainder of Air Basin		X	Remainder of Air Basin		X
NORTH CENTRAL COAST AIR BASIN		X			
NORTH COAST AIR BASIN		X			
NORTHEAST PLATEAU AIR BASIN		X			
SACRAMENTO VALLEY AIR BASIN					
Sacramento Metro Area (1)	X				
Sutter County		X			
Yuba County (portion)		X			
Remainder of Air Basin		X			

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305. This map reflects the 2006 24-hour PM2.5 standard as well as the 1997 and 2012 PM2.5 annual standards.

(1) For this purpose, Sacramento Metro Area comprises all of Sacramento and portions of El Dorado, Placer, Solano, and Yolo Counties. Air quality in this area meets the national PM2.5 standards. A Determination of Attainment for the 2006 24-hour PM2.5 standard was made by U.S. EPA in June 2017.

(2) Air quality in this area meets the national PM2.5 standards. A Determination of Attainment for the 2006 24-hour PM2.5 standard was made by U.S. EPA in June 2017.

(3) Those lands of the Santa Rosa Band of Cahulla Mission Indians in Riverside County are designated Unclassifiable/Attainment.

(4) That portion of Imperial County encompassing the urban and surrounding areas of Brawley, Calexico, El Centro, Heber, Holtville, Imperial, Seeley, and Westmorland. Air quality in this area meets the national PM2.5 standards. A Determination of Attainment for the 2006 24-hour PM2.5 standard was made by U.S. EPA in June 2017.

FIGURE 14


Area Designations for National Ambient Air Quality Standards
CARBON MONOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Shasta
Trinity
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
Colusa
Lake
Sutter
Yuba
Placer
LAKE TAHOE
LAKE COUNTY
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
San Joaquin
Contra Costa
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
SOUTHEAST DESERT
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Air Basin
County
Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 14

National Ambient Air Quality Standards
Area Designations for Carbon Monoxide*

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SACRAMENTO VALLEY AIR BASIN		X
LAKE COUNTY AIR BASIN		X	SAN DIEGO COUNTY		X
LAKE TAHOE AIR BASIN		X	SAN FRANCISCO BAY AREA AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X	SOUTH CENTRAL COAST AIR BASIN		X
NORTH COAST AIR BASIN		X	SOUTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X	SOUTHEAST DESERT AIR BASIN		X

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

FIGURE 15


Area Designations for National Ambient Air Quality Standards
NITROGEN DIOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehema
Plumas
SACRAMENTO VALLEY
Mendocino
Glenn
Butte
Sierra
Nevada
MOUNTAIN COUNTIES
Colusa
Yuba
Placer
LAKE COUNTY
Lake
Sutter
LAKE TAHOE
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Marin
Calaveras
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Tulare
Inyo
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
SOUTHEAST DESERT
Los Angeles
San Bernardino
Ventura
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Air Basin
County
Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 15

National Ambient Air Quality Standards
Area Designations for Nitrogen Dioxide*

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SACRAMENTO VALLEY AIR BASIN		X
LAKE COUNTY AIR BASIN		X	SAN DIEGO COUNTY		X
LAKE TAHOE AIR BASIN		X	SAN FRANCISCO BAY AREA AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X	SOUTH CENTRAL COAST AIR BASIN		X
NORTH COAST AIR BASIN		X	SOUTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X	SOUTHEAST DESERT AIR BASIN		X

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

FIGURE 16



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 16

National Ambient Air Quality Standards
Area Designations for Sulfur Dioxide*

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SOUTH CENTRAL COAST AIR BASIN		
LAKE COUNTY AIR BASIN		X	San Luis Obispo County		X
LAKE TAHOE AIR BASIN		X	Santa Barbara County		X
MOUNTAIN COUNTIES AIR BASIN		X	Ventura County		X
NORTH CENTRAL COAST AIR BASIN		X	Channel Islands (1)		X
NORTH COAST AIR BASIN		X	SOUTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X	SOUTHEAST DESERT AIR BASIN		
SACRAMENTO VALLEY AIR BASIN		X	Imperial County		X
SAN DIEGO COUNTY		X	Remainder of Air Basin		X
SAN FRANCISCO BAY AREA AIR BASIN		X			
SAN JOAQUIN VALLEY AIR BASIN					
Fresno County		X			
Kern County (portion)		X			
Kings County		X			
Madera County		X			
Merced County		X			
San Joaquin County		X			
Stanislaus County		X			
Tulare County		X			

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

NOTE: This map and table reflect the 2010 1-hour SO_2 standard of 75 ppb.

(1) South Central Coast Air Basin Channel Islands:

Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.

Ventura County includes Anacapa and San Nicolas Islands.

Note that the San Clemente and Santa Catalina Islands are considered part of Los Angeles County, and therefore, are included as part of the South Coast Air Basin.

FIGURE 17


Area Designations for National Ambient Air Quality Standards
LEAD
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Shasta
Lassen
Trinity
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
Colusa
Lake
Sutter
Yuba
Placer
LAKE TAHOE
LAKE COUNTY
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
San Joaquin
Contra Costa
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
SOUTHEAST DESERT
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Nonattainment
Air Basin
County
Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 17

National Ambient Air Quality Standards
Area Designations for Lead (particulate)

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SAN DIEGO COUNTY		X
LAKE COUNTY AIR BASIN		X	SAN FRANCISCO BAY AREA AIR BASIN		X
LAKE TAHOE AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		X	SOUTH CENTRAL COAST AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X	SOUTH COAST AIR BASIN		
NORTH COAST AIR BASIN		X	Los Angeles County (portion) (1)	X	
NORTHEAST PLATEAU AIR BASIN		X	Remainder of Air Basin		X
SACRAMENTO VALLEY AIR BASIN		X	SOUTHEAST DESERT AIR BASIN		X

(1) Portion of County in Air Basin, not including Channel Islands

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APPENDIX 3.1:

CALEEMOD CONSTRUCTION EMISSIONS MODEL OUTPUTS

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Durst Drive Warehouse (Construction - Unmitigated)

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	203.35	1000sqft	4.67	203,351.00	0
Parking Lot	183.00	Space	1.10	48,110.00	0
Other Asphalt Surfaces	145.08	1000sqft	3.33	145,079.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Project area is 9.10 acres

Construction Phase - Construction anticipated to begin July 2022 and end in June 2023

Off-road Equipment - Equipment based on consultation with Project Team

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment -

Off-road Equipment - Hours are based on an 8-hour workday

Grading - Analysis conservatively assumes that up to 10 acres can be disturbed per day

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition -

Trips and VMT - Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction

Architectural Coating - Rule 1113

Vehicle Trips - Construction run only

Energy Use - Construction run only

Water And Wastewater - Construction run only

Solid Waste - Construction run only

Construction Off-road Equipment Mitigation - Rule 403

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblConstructionPhase	NumDays	230.00	200.00
tblConstructionPhase	PhaseEndDate	9/21/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	7/27/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	8/24/2023	6/15/2023
tblConstructionPhase	PhaseStartDate	8/25/2023	5/19/2023
tblConstructionPhase	PhaseStartDate	7/28/2023	5/19/2023
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	LightingElect	1.17	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	0.33	0.00
tblEnergyUse	T24NG	1.98	0.00
tblGrading	AcresOfGrading	90.00	200.00
tblGrading	AcresOfGrading	35.00	100.00
tblGrading	MaterialExported	0.00	15,935.00
tblLandUse	LandUseSquareFeet	73,200.00	48,110.00
tblLandUse	LotAcreage	1.65	1.10

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	191.15	0.00
tblTripsAndVMT	HaulingTripLength	20.00	7.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	65.00	52.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CNW_TL	6.90	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	0.00
tblVehicleTrips	ST_TR	1.74	0.00
tblVehicleTrips	SU_TR	1.74	0.00
tblVehicleTrips	WD_TR	1.74	0.00
tblWater	IndoorWaterUseRate	47,024,687.50	0.00

2.0 Emissions Summary

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	4.8320	63.8428	29.4079	0.1305	28.8917	2.1590	31.0507	11.1347	1.9864	13.1210	0.0000	13,362.3363	13,362.3363	2.4459	1.0304	13,730.5347
2023	55.1350	40.4646	43.2193	0.1005	2.7363	1.7471	4.4834	0.7333	1.6300	2.3633	0.0000	9,885.6493	9,885.6493	1.9251	0.1990	9,993.0868
Maximum	**55.1350**	**63.8428**	**43.2193**	**0.1305**	**28.8917**	**2.1590**	**31.0507**	**11.1347**	**1.9864**	**13.1210**	**0.0000**	**13,362.3363**	**13,362.3363**	**2.4459**	**1.0304**	**13,730.5347**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	4.8320	63.8428	29.4079	0.1305	11.4022	2.1590	13.5612	4.3784	1.9864	6.3648	0.0000	13,362.3363	13,362.3363	2.4459	1.0304	13,730.5347
2023	55.1350	40.4646	43.2193	0.1005	2.7363	1.7471	4.4834	0.7333	1.6300	2.3633	0.0000	9,885.6493	9,885.6493	1.9251	0.1990	9,993.0867
Maximum	**55.1350**	**63.8428**	**43.2193**	**0.1305**	**11.4022**	**2.1590**	**13.5612**	**4.3784**	**1.9864**	**6.3648**	**0.0000**	**13,362.3363**	**13,362.3363**	**2.4459**	**1.0304**	**13,730.5347**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	55.30	0.00	49.22	56.93	0.00	43.63	0.00	0.00	0.00	0.00	0.00	0.00

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6310	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.6310**	**4.9000e-004**	**0.0543**	**0.0000**	**0.0000**	**1.9000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**1.9000e-004**		**0.1163**	**0.1163**	**3.1000e-004**	**0.0000**	**0.1239**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6310	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.6310**	**4.9000e-004**	**0.0543**	**0.0000**	**0.0000**	**1.9000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**1.9000e-004**		**0.1163**	**0.1163**	**3.1000e-004**	**0.0000**	**0.1239**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2022	7/28/2022	5	20	
2	Site Preparation	Site Preparation	7/29/2022	8/11/2022	5	10	
3	Grading	Grading	8/12/2022	9/8/2022	5	20	
4	Building Construction	Building Construction	9/9/2022	6/15/2023	5	200	
5	Paving	Paving	5/19/2023	6/15/2023	5	20	
6	Architectural Coating	Architectural Coating	5/19/2023	6/15/2023	5	20	

Acres of Grading (Site Preparation Phase): 100

Acres of Grading (Grading Phase): 200

Acres of Paving: 4.43

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 305,027; Non-Residential Outdoor: 101,676; Striped Parking Area: 11,591 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	8.00	78	0.48
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Demolition	Excavators	2	8.00	158	0.38
Grading	Excavators	0	8.00	158	0.38

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Demolition	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Grading	Crawler Tractors	3	8.00	212	0.43
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Crawler Tractors	3	8.00	212	0.43

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	5.00	232.00	14.70	6.90	7.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	5.00	1,992.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	167.00	52.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5144	0.0000	2.5144	0.3807	0.0000	0.3807			0.0000			0.0000
Off-Road	0.4742	4.4788	7.8918	0.0124		0.2062	0.2062		0.1897	0.1897		1,199.6094	1,199.6094	0.3880		1,209.3089
Total	**0.4742**	**4.4788**	**7.8918**	**0.0124**	**2.5144**	**0.2062**	**2.7206**	**0.3807**	**0.1897**	**0.5704**		**1,199.6094**	**1,199.6094**	**0.3880**		**1,209.3089**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0257	0.7150	0.2792	2.6400e-003	0.0713	5.9200e-003	0.0772	0.0196	5.6700e-003	0.0252		286.7318	286.7318	0.0118	0.0454	300.5609
Vendor	8.7100e-003	0.2190	0.0804	9.3000e-004	0.0320	2.6100e-003	0.0346	9.2200e-003	2.4900e-003	0.0117		100.0344	100.0344	2.7000e-003	0.0148	104.5134
Worker	0.0339	0.0215	0.3296	8.3000e-004	0.0894	4.7000e-004	0.0899	0.0237	4.3000e-004	0.0242		83.9654	83.9654	2.1800e-003	2.0900e-003	84.6427
Total	**0.0683**	**0.9555**	**0.6891**	**4.4000e-003**	**0.1927**	**9.0000e-003**	**0.2017**	**0.0525**	**8.5900e-003**	**0.0611**		**470.7316**	**470.7316**	**0.0167**	**0.0623**	**489.7170**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9806	0.0000	0.9806	0.1485	0.0000	0.1485			0.0000			0.0000
Off-Road	0.4742	4.4788	7.8918	0.0124		0.2062	0.2062		0.1897	0.1897	0.0000	1,199.6094	1,199.6094	0.3880		1,209.3089
Total	**0.4742**	**4.4788**	**7.8918**	**0.0124**	**0.9806**	**0.2062**	**1.1868**	**0.1485**	**0.1897**	**0.3382**	**0.0000**	**1,199.6094**	**1,199.6094**	**0.3880**		**1,209.3089**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0257	0.7150	0.2792	2.6400e-003	0.0713	5.9200e-003	0.0772	0.0196	5.6700e-003	0.0252		286.7318	286.7318	0.0118	0.0454	300.5609
Vendor	8.7100e-003	0.2190	0.0804	9.3000e-004	0.0320	2.6100e-003	0.0346	9.2200e-003	2.4900e-003	0.0117		100.0344	100.0344	2.7000e-003	0.0148	104.5134
Worker	0.0339	0.0215	0.3296	8.3000e-004	0.0894	4.7000e-004	0.0899	0.0237	4.3000e-004	0.0242		83.9654	83.9654	2.1800e-003	2.0900e-003	84.6427
Total	**0.0683**	**0.9555**	**0.6891**	**4.4000e-003**	**0.1927**	**9.0000e-003**	**0.2017**	**0.0525**	**8.5900e-003**	**0.0611**		**470.7316**	**470.7316**	**0.0167**	**0.0623**	**489.7170**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					28.6713	0.0000	28.6713	11.0758	0.0000	11.0758			0.0000			0.0000
Off-Road	4.4735	50.3453	19.9794	0.0569		2.1564	2.1564		1.9839	1.9839		5,508.7626	5,508.7626	1.7817		5,553.3037
Total	**4.4735**	**50.3453**	**19.9794**	**0.0569**	**28.6713**	**2.1564**	**30.8277**	**11.0758**	**1.9839**	**13.0597**		**5,508.7626**	**5,508.7626**	**1.7817**		**5,553.3037**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2300e-003	0.1314	0.0482	5.6000e-004	0.0192	1.5600e-003	0.0208	5.5300e-003	1.5000e-003	7.0300e-003		60.0207	60.0207	1.6200e-003	8.8800e-003	62.7081
Worker	0.0762	0.0483	0.7415	1.8600e-003	0.2012	1.0600e-003	0.2023	0.0534	9.7000e-004	0.0543		188.9222	188.9222	4.9100e-003	4.7000e-003	190.4461
Total	**0.0815**	**0.1797**	**0.7897**	**2.4200e-003**	**0.2204**	**2.6200e-003**	**0.2230**	**0.0589**	**2.4700e-003**	**0.0614**		**248.9429**	**248.9429**	**6.5300e-003**	**0.0136**	**253.1541**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					11.1818	0.0000	11.1818	4.3196	0.0000	4.3196			0.0000			0.0000
Off-Road	4.4735	50.3453	19.9794	0.0569		2.1564	2.1564		1.9839	1.9839	0.0000	5,508.7626	5,508.7626	1.7817		5,553.3037
Total	**4.4735**	**50.3453**	**19.9794**	**0.0569**	**11.1818**	**2.1564**	**13.3382**	**4.3196**	**1.9839**	**6.3035**	**0.0000**	**5,508.7626**	**5,508.7626**	**1.7817**		**5,553.3037**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2300e-003	0.1314	0.0482	5.6000e-004	0.0192	1.5600e-003	0.0208	5.5300e-003	1.5000e-003	7.0300e-003		60.0207	60.0207	1.6200e-003	8.8800e-003	62.7081
Worker	0.0762	0.0483	0.7415	1.8600e-003	0.2012	1.0600e-003	0.2023	0.0534	9.7000e-004	0.0543		188.9222	188.9222	4.9100e-003	4.7000e-003	190.4461
Total	**0.0815**	**0.1797**	**0.7897**	**2.4200e-003**	**0.2204**	**2.6200e-003**	**0.2230**	**0.0589**	**2.4700e-003**	**0.0614**		**248.9429**	**248.9429**	**6.5300e-003**	**0.0136**	**253.1541**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					16.7172	0.0000	16.7172	4.4690	0.0000	4.4690			0.0000			0.0000
Off-Road	4.3704	50.0009	25.0442	0.0691		1.9646	1.9646		1.8074	1.8074		6,694.3474	6,694.3474	2.1651		6,748.4746
Total	**4.3704**	**50.0009**	**25.0442**	**0.0691**	**16.7172**	**1.9646**	**18.6817**	**4.4690**	**1.8074**	**6.2763**		**6,694.3474**	**6,694.3474**	**2.1651**		**6,748.4746**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3766	13.5747	3.5418	0.0586	1.7442	0.1426	1.8868	0.4783	0.1364	0.6147		6,379.0322	6,379.0322	0.2732	1.0109	6,687.1006
Vendor	8.7100e-003	0.2190	0.0804	9.3000e-004	0.0320	2.6100e-003	0.0346	9.2200e-003	2.4900e-003	0.0117		100.0344	100.0344	2.7000e-003	0.0148	104.5134
Worker	0.0762	0.0483	0.7415	1.8600e-003	0.2012	1.0600e-003	0.2023	0.0534	9.7000e-004	0.0543		188.9222	188.9222	4.9100e-003	4.7000e-003	190.4461
Total	**0.4616**	**13.8419**	**4.3637**	**0.0614**	**1.9775**	**0.1463**	**2.1237**	**0.5409**	**0.1399**	**0.6808**		**6,667.9889**	**6,667.9889**	**0.2808**	**1.0304**	**6,982.0601**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5197	0.0000	6.5197	1.7429	0.0000	1.7429			0.0000			0.0000
Off-Road	4.3704	50.0009	25.0442	0.0691		1.9646	1.9646		1.8074	1.8074	0.0000	6,694.3474	6,694.3474	2.1651		6,748.4746
Total	**4.3704**	**50.0009**	**25.0442**	**0.0691**	**6.5197**	**1.9646**	**8.4843**	**1.7429**	**1.8074**	**3.5503**	**0.0000**	**6,694.3474**	**6,694.3474**	**2.1651**		**6,748.4746**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3766	13.5747	3.5418	0.0586	1.7442	0.1426	1.8868	0.4783	0.1364	0.6147		6,379.0322	6,379.0322	0.2732	1.0109	6,687.1006
Vendor	8.7100e-003	0.2190	0.0804	9.3000e-004	0.0320	2.6100e-003	0.0346	9.2200e-003	2.4900e-003	0.0117		100.0344	100.0344	2.7000e-003	0.0148	104.5134
Worker	0.0762	0.0483	0.7415	1.8600e-003	0.2012	1.0600e-003	0.2023	0.0534	9.7000e-004	0.0543		188.9222	188.9222	4.9100e-003	4.7000e-003	190.4461
Total	**0.4616**	**13.8419**	**4.3637**	**0.0614**	**1.9775**	**0.1463**	**2.1237**	**0.5409**	**0.1399**	**0.6808**		**6,667.9889**	**6,667.9889**	**0.2808**	**1.0304**	**6,982.0601**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7963	29.7637	17.6698	0.0430		1.2743	1.2743		1.1892	1.1892		4,110.5322	4,110.5322	1.1153		4,138.4135
Total	**2.7963**	**29.7637**	**17.6698**	**0.0430**		**1.2743**	**1.2743**		**1.1892**	**1.1892**		**4,110.5322**	**4,110.5322**	**1.1153**		**4,138.4135**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0906	2.2771	0.8357	9.7000e-003	0.3332	0.0271	0.3603	0.0959	0.0259	0.1219		1,040.3579	1,040.3579	0.0281	0.1540	1,086.9396
Worker	0.7073	0.4480	6.8797	0.0172	1.8667	9.8000e-003	1.8765	0.4951	9.0200e-003	0.5041		1,752.7785	1,752.7785	0.0456	0.0436	1,766.9162
Total	**0.7979**	**2.7251**	**7.7154**	**0.0269**	**2.1998**	**0.0369**	**2.2367**	**0.5910**	**0.0349**	**0.6259**		**2,793.1364**	**2,793.1364**	**0.0737**	**0.1976**	**2,853.8558**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7963	29.7637	17.6698	0.0430		1.2743	1.2743		1.1892	1.1892	0.0000	4,110.5322	4,110.5322	1.1153		4,138.4135
Total	**2.7963**	**29.7637**	**17.6698**	**0.0430**		**1.2743**	**1.2743**		**1.1892**	**1.1892**	**0.0000**	**4,110.5322**	**4,110.5322**	**1.1153**		**4,138.4135**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0906	2.2771	0.8357	9.7000e-003	0.3332	0.0271	0.3603	0.0959	0.0259	0.1219		1,040.3579	1,040.3579	0.0281	0.1540	1,086.9396
Worker	0.7073	0.4480	6.8797	0.0172	1.8667	9.8000e-003	1.8765	0.4951	9.0200e-003	0.5041		1,752.7785	1,752.7785	0.0456	0.0436	1,766.9162
Total	**0.7979**	**2.7251**	**7.7154**	**0.0269**	**2.1998**	**0.0369**	**2.2367**	**0.5910**	**0.0349**	**0.6259**		**2,793.1364**	**2,793.1364**	**0.0737**	**0.1976**	**2,853.8558**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5519	26.2044	17.3471	0.0430		1.1169	1.1169		1.0422	1.0422		4,108.2392	4,108.2392	1.1101		4,135.9924
Total	**2.5519**	**26.2044**	**17.3471**	**0.0430**		**1.1169**	**1.1169**		**1.0422**	**1.0422**		**4,108.2392**	**4,108.2392**	**1.1101**		**4,135.9924**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0609	1.8239	0.7654	9.3000e-003	0.3332	0.0137	0.3469	0.0959	0.0131	0.1090		997.9745	997.9745	0.0261	0.1474	1,042.5439
Worker	0.6530	0.3940	6.2977	0.0167	1.8667	9.2200e-003	1.8759	0.4951	8.4900e-003	0.5035		1,706.1865	1,706.1865	0.0408	0.0401	1,719.1613
Total	**0.7139**	**2.2180**	**7.0631**	**0.0260**	**2.1998**	**0.0229**	**2.2228**	**0.5910**	**0.0216**	**0.6126**		**2,704.1610**	**2,704.1610**	**0.0668**	**0.1875**	**2,761.7052**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5519	26.2044	17.3471	0.0430		1.1169	1.1169		1.0422	1.0422	0.0000	4,108.2392	4,108.2392	1.1101		4,135.9924
Total	**2.5519**	**26.2044**	**17.3471**	**0.0430**		**1.1169**	**1.1169**		**1.0422**	**1.0422**	**0.0000**	**4,108.2392**	**4,108.2392**	**1.1101**		**4,135.9924**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0609	1.8239	0.7654	9.3000e-003	0.3332	0.0137	0.3469	0.0959	0.0131	0.1090		997.9745	997.9745	0.0261	0.1474	1,042.5439
Worker	0.6530	0.3940	6.2977	0.0167	1.8667	9.2200e-003	1.8759	0.4951	8.4900e-003	0.5035		1,706.1865	1,706.1865	0.0408	0.0401	1,719.1613
Total	**0.7139**	**2.2180**	**7.0631**	**0.0260**	**2.1998**	**0.0229**	**2.2228**	**0.5910**	**0.0216**	**0.6126**		**2,704.1610**	**2,704.1610**	**0.0668**	**0.1875**	**2,761.7052**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.5803					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6131**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0587	0.0354	0.5657	1.5000e-003	0.1677	8.3000e-004	0.1685	0.0445	7.6000e-004	0.0452		153.2503	153.2503	3.6600e-003	3.6000e-003	154.4157
Total	**0.0587**	**0.0354**	**0.5657**	**1.5000e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.6000e-004**	**0.0452**		**153.2503**	**153.2503**	**3.6600e-003**	**3.6000e-003**	**154.4157**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.5803					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6131**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0587	0.0354	0.5657	1.5000e-003	0.1677	8.3000e-004	0.1685	0.0445	7.6000e-004	0.0452		153.2503	153.2503	3.6600e-003	3.6000e-003	154.4157
Total	**0.0587**	**0.0354**	**0.5657**	**1.5000e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.6000e-004**	**0.0452**		**153.2503**	**153.2503**	**3.6600e-003**	**3.6000e-003**	**154.4157**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	49.8129					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944		375.2641	375.2641	0.0225		375.8253
Total	**50.0685**	**1.7373**	**2.4148**	**3.9600e-003**		**0.0944**	**0.0944**		**0.0944**	**0.0944**		**375.2641**	**375.2641**	**0.0225**		**375.8253**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1290	0.0779	1.2445	3.2900e-003	0.3689	1.8200e-003	0.3707	0.0978	1.6800e-003	0.0995		337.1506	337.1506	8.0500e-003	7.9300e-003	339.7145
Total	**0.1290**	**0.0779**	**1.2445**	**3.2900e-003**	**0.3689**	**1.8200e-003**	**0.3707**	**0.0978**	**1.6800e-003**	**0.0995**		**337.1506**	**337.1506**	**8.0500e-003**	**7.9300e-003**	**339.7145**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	49.8129					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944	0.0000	375.2641	375.2641	0.0225		375.8253
Total	**50.0685**	**1.7373**	**2.4148**	**3.9600e-003**		**0.0944**	**0.0944**		**0.0944**	**0.0944**	**0.0000**	**375.2641**	**375.2641**	**0.0225**		**375.8253**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1290	0.0779	1.2445	3.2900e-003	0.3689	1.8200e-003	0.3707	0.0978	1.6800e-003	0.0995		337.1506	337.1506	8.0500e-003	7.9300e-003	339.7145
Total	**0.1290**	**0.0779**	**1.2445**	**3.2900e-003**	**0.3689**	**1.8200e-003**	**0.3707**	**0.0978**	**1.6800e-003**	**0.0995**		**337.1506**	**337.1506**	**8.0500e-003**	**7.9300e-003**	**339.7145**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Parking Lot	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unrefrigerated Warehouse-No Rail	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.6310	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Unmitigated	4.6310	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.0948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0200e-003	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Total	**4.6310**	**4.9000e-004**	**0.0543**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1163**	**0.1163**	**3.1000e-004**		**0.1239**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.0948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0200e-003	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Total	**4.6310**	**4.9000e-004**	**0.0543**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1163**	**0.1163**	**3.1000e-004**		**0.1239**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Durst Drive Warehouse (Construction - Unmitigated)

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	203.35	1000sqft	4.67	203,351.00	0
Parking Lot	183.00	Space	1.10	48,110.00	0
Other Asphalt Surfaces	145.08	1000sqft	3.33	145,079.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Project area is 9.10 acres

Construction Phase - Construction anticipated to begin July 2022 and end in June 2023

Off-road Equipment - Equipment based on consultation with Project Team

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment -

Off-road Equipment - Hours are based on an 8-hour workday

Grading - Analysis conservatively assumes that up to 10 acres can be disturbed per day

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition -

Trips and VMT - Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction

Architectural Coating - Rule 1113

Vehicle Trips - Construction run only

Energy Use - Construction run only

Water And Wastewater - Construction run only

Solid Waste - Construction run only

Construction Off-road Equipment Mitigation - Rule 403

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblConstructionPhase	NumDays	230.00	200.00
tblConstructionPhase	PhaseEndDate	9/21/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	7/27/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	8/24/2023	6/15/2023
tblConstructionPhase	PhaseStartDate	8/25/2023	5/19/2023
tblConstructionPhase	PhaseStartDate	7/28/2023	5/19/2023
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	LightingElect	1.17	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	0.33	0.00
tblEnergyUse	T24NG	1.98	0.00
tblGrading	AcresOfGrading	90.00	200.00
tblGrading	AcresOfGrading	35.00	100.00
tblGrading	MaterialExported	0.00	15,935.00
tblLandUse	LandUseSquareFeet	73,200.00	48,110.00
tblLandUse	LotAcreage	1.65	1.10

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	191.15	0.00
tblTripsAndVMT	HaulingTripLength	20.00	7.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	65.00	52.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CNW_TL	6.90	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	0.00
tblVehicleTrips	ST_TR	1.74	0.00
tblVehicleTrips	SU_TR	1.74	0.00
tblVehicleTrips	WD_TR	1.74	0.00
tblWater	IndoorWaterUseRate	47,024,687.50	0.00

2.0 Emissions Summary

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	4.8131	64.5343	29.3583	0.1304	28.8917	2.1590	31.0507	11.1347	1.9864	13.1210	0.0000	13,349.3932	13,349.3932	2.4451	1.0313	13,717.8501
2023	55.0998	40.5933	41.8083	0.0985	2.7363	1.7471	4.4835	0.7333	1.6301	2.3634	0.0000	9,681.5345	9,681.5345	1.9250	0.2011	9,789.5996
Maximum	**55.0998**	**64.5343**	**41.8083**	**0.1304**	**28.8917**	**2.1590**	**31.0507**	**11.1347**	**1.9864**	**13.1210**	**0.0000**	**13,349.3932**	**13,349.3932**	**2.4451**	**1.0313**	**13,717.8501**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	4.8131	64.5343	29.3583	0.1304	11.4022	2.1590	13.5613	4.3784	1.9864	6.3648	0.0000	13,349.3932	13,349.3932	2.4451	1.0313	13,717.8501
2023	55.0998	40.5933	41.8083	0.0985	2.7363	1.7471	4.4835	0.7333	1.6301	2.3634	0.0000	9,681.5345	9,681.5345	1.9250	0.2011	9,789.5996
Maximum	**55.0998**	**64.5343**	**41.8083**	**0.1304**	**11.4022**	**2.1590**	**13.5613**	**4.3784**	**1.9864**	**6.3648**	**0.0000**	**13,349.3932**	**13,349.3932**	**2.4451**	**1.0313**	**13,717.8501**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	55.30	0.00	49.22	56.93	0.00	43.63	0.00	0.00	0.00	0.00	0.00	0.00

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6310	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.6310**	**4.9000e-004**	**0.0543**	**0.0000**	**0.0000**	**1.9000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**1.9000e-004**		**0.1163**	**0.1163**	**3.1000e-004**	**0.0000**	**0.1239**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6310	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.6310**	**4.9000e-004**	**0.0543**	**0.0000**	**0.0000**	**1.9000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**1.9000e-004**		**0.1163**	**0.1163**	**3.1000e-004**	**0.0000**	**0.1239**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2022	7/28/2022	5	20	
2	Site Preparation	Site Preparation	7/29/2022	8/11/2022	5	10	
3	Grading	Grading	8/12/2022	9/8/2022	5	20	
4	Building Construction	Building Construction	9/9/2022	6/15/2023	5	200	
5	Paving	Paving	5/19/2023	6/15/2023	5	20	
6	Architectural Coating	Architectural Coating	5/19/2023	6/15/2023	5	20	

Acres of Grading (Site Preparation Phase): 100

Acres of Grading (Grading Phase): 200

Acres of Paving: 4.43

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 305,027; Non-Residential Outdoor: 101,676; Striped Parking Area: 11,591 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	8.00	78	0.48
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Demolition	Excavators	2	8.00	158	0.38
Grading	Excavators	0	8.00	158	0.38

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Demolition	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Grading	Crawler Tractors	3	8.00	212	0.43
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Crawler Tractors	3	8.00	212	0.43

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	5.00	232.00	14.70	6.90	7.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	5.00	1,992.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	167.00	52.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5144	0.0000	2.5144	0.3807	0.0000	0.3807			0.0000			0.0000
Off-Road	0.4742	4.4788	7.8918	0.0124		0.2062	0.2062		0.1897	0.1897		1,199.6094	1,199.6094	0.3880		1,209.3089
Total	**0.4742**	**4.4788**	**7.8918**	**0.0124**	**2.5144**	**0.2062**	**2.7206**	**0.3807**	**0.1897**	**0.5704**		**1,199.6094**	**1,199.6094**	**0.3880**		**1,209.3089**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0239	0.7538	0.2886	2.6400e-003	0.0713	5.9500e-003	0.0772	0.0196	5.6900e-003	0.0252		287.2867	287.2867	0.0117	0.0455	301.1395
Vendor	8.3700e-003	0.2299	0.0832	9.3000e-004	0.0320	2.6100e-003	0.0347	9.2200e-003	2.5000e-003	0.0117		100.1448	100.1448	2.6900e-003	0.0148	104.6310
Worker	0.0326	0.0226	0.2707	7.5000e-004	0.0894	4.7000e-004	0.0899	0.0237	4.3000e-004	0.0242		76.0471	76.0471	2.1800e-003	2.1600e-003	76.7445
Total	**0.0648**	**1.0062**	**0.6425**	**4.3200e-003**	**0.1927**	**9.0300e-003**	**0.2018**	**0.0525**	**8.6200e-003**	**0.0611**		**463.4785**	**463.4785**	**0.0166**	**0.0625**	**482.5150**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9806	0.0000	0.9806	0.1485	0.0000	0.1485			0.0000			0.0000
Off-Road	0.4742	4.4788	7.8918	0.0124		0.2062	0.2062		0.1897	0.1897	0.0000	1,199.6094	1,199.6094	0.3880		1,209.3089
Total	**0.4742**	**4.4788**	**7.8918**	**0.0124**	**0.9806**	**0.2062**	**1.1868**	**0.1485**	**0.1897**	**0.3382**	**0.0000**	**1,199.6094**	**1,199.6094**	**0.3880**		**1,209.3089**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0239	0.7538	0.2886	2.6400e-003	0.0713	5.9500e-003	0.0772	0.0196	5.6900e-003	0.0252		287.2867	287.2867	0.0117	0.0455	301.1395
Vendor	8.3700e-003	0.2299	0.0832	9.3000e-004	0.0320	2.6100e-003	0.0347	9.2200e-003	2.5000e-003	0.0117		100.1448	100.1448	2.6900e-003	0.0148	104.6310
Worker	0.0326	0.0226	0.2707	7.5000e-004	0.0894	4.7000e-004	0.0899	0.0237	4.3000e-004	0.0242		76.0471	76.0471	2.1800e-003	2.1600e-003	76.7445
Total	**0.0648**	**1.0062**	**0.6425**	**4.3200e-003**	**0.1927**	**9.0300e-003**	**0.2018**	**0.0525**	**8.6200e-003**	**0.0611**		**463.4785**	**463.4785**	**0.0166**	**0.0625**	**482.5150**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					28.6713	0.0000	28.6713	11.0758	0.0000	11.0758			0.0000			0.0000
Off-Road	4.4735	50.3453	19.9794	0.0569		2.1564	2.1564		1.9839	1.9839		5,508.7626	5,508.7626	1.7817		5,553.3037
Total	**4.4735**	**50.3453**	**19.9794**	**0.0569**	**28.6713**	**2.1564**	**30.8277**	**11.0758**	**1.9839**	**13.0597**		**5,508.7626**	**5,508.7626**	**1.7817**		**5,553.3037**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0200e-003	0.1379	0.0499	5.6000e-004	0.0192	1.5700e-003	0.0208	5.5300e-003	1.5000e-003	7.0300e-003		60.0869	60.0869	1.6100e-003	8.9000e-003	62.7786
Worker	0.0732	0.0508	0.6091	1.6800e-003	0.2012	1.0600e-003	0.2023	0.0534	9.7000e-004	0.0543		171.1060	171.1060	4.9000e-003	4.8500e-003	172.6750
Total	**0.0783**	**0.1887**	**0.6590**	**2.2400e-003**	**0.2204**	**2.6300e-003**	**0.2230**	**0.0589**	**2.4700e-003**	**0.0614**		**231.1929**	**231.1929**	**6.5100e-003**	**0.0138**	**235.4536**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					11.1818	0.0000	11.1818	4.3196	0.0000	4.3196			0.0000			0.0000
Off-Road	4.4735	50.3453	19.9794	0.0569		2.1564	2.1564		1.9839	1.9839	0.0000	5,508.7626	5,508.7626	1.7817		5,553.3037
Total	**4.4735**	**50.3453**	**19.9794**	**0.0569**	**11.1818**	**2.1564**	**13.3382**	**4.3196**	**1.9839**	**6.3035**	**0.0000**	**5,508.7626**	**5,508.7626**	**1.7817**		**5,553.3037**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0200e-003	0.1379	0.0499	5.6000e-004	0.0192	1.5700e-003	0.0208	5.5300e-003	1.5000e-003	7.0300e-003		60.0869	60.0869	1.6100e-003	8.9000e-003	62.7786
Worker	0.0732	0.0508	0.6091	1.6800e-003	0.2012	1.0600e-003	0.2023	0.0534	9.7000e-004	0.0543		171.1060	171.1060	4.9000e-003	4.8500e-003	172.6750
Total	**0.0783**	**0.1887**	**0.6590**	**2.2400e-003**	**0.2204**	**2.6300e-003**	**0.2230**	**0.0589**	**2.4700e-003**	**0.0614**		**231.1929**	**231.1929**	**6.5100e-003**	**0.0138**	**235.4536**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					16.7172	0.0000	16.7172	4.4690	0.0000	4.4690			0.0000			0.0000
Off-Road	4.3704	50.0009	25.0442	0.0691		1.9646	1.9646		1.8074	1.8074		6,694.3474	6,694.3474	2.1651		6,748.4746
Total	**4.3704**	**50.0009**	**25.0442**	**0.0691**	**16.7172**	**1.9646**	**18.6817**	**4.4690**	**1.8074**	**6.2763**		**6,694.3474**	**6,694.3474**	**2.1651**		**6,748.4746**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3611	14.2528	3.6218	0.0586	1.7442	0.1428	1.8871	0.4783	0.1366	0.6149		6,383.7950	6,383.7950	0.2724	1.0116	6,692.0695
Vendor	8.3700e-003	0.2299	0.0832	9.3000e-004	0.0320	2.6100e-003	0.0347	9.2200e-003	2.5000e-003	0.0117		100.1448	100.1448	2.6900e-003	0.0148	104.6310
Worker	0.0732	0.0508	0.6091	1.6800e-003	0.2012	1.0600e-003	0.2023	0.0534	9.7000e-004	0.0543		171.1060	171.1060	4.9000e-003	4.8500e-003	172.6750
Total	**0.4427**	**14.5334**	**4.3141**	**0.0612**	**1.9775**	**0.1465**	**2.1240**	**0.5409**	**0.1401**	**0.6810**		**6,655.0458**	**6,655.0458**	**0.2800**	**1.0313**	**6,969.3755**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5197	0.0000	6.5197	1.7429	0.0000	1.7429			0.0000			0.0000
Off-Road	4.3704	50.0009	25.0442	0.0691		1.9646	1.9646		1.8074	1.8074	0.0000	6,694.3474	6,694.3474	2.1651		6,748.4746
Total	**4.3704**	**50.0009**	**25.0442**	**0.0691**	**6.5197**	**1.9646**	**8.4843**	**1.7429**	**1.8074**	**3.5503**	**0.0000**	**6,694.3474**	**6,694.3474**	**2.1651**		**6,748.4746**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3611	14.2528	3.6218	0.0586	1.7442	0.1428	1.8871	0.4783	0.1366	0.6149		6,383.7950	6,383.7950	0.2724	1.0116	6,692.0695
Vendor	8.3700e-003	0.2299	0.0832	9.3000e-004	0.0320	2.6100e-003	0.0347	9.2200e-003	2.5000e-003	0.0117		100.1448	100.1448	2.6900e-003	0.0148	104.6310
Worker	0.0732	0.0508	0.6091	1.6800e-003	0.2012	1.0600e-003	0.2023	0.0534	9.7000e-004	0.0543		171.1060	171.1060	4.9000e-003	4.8500e-003	172.6750
Total	**0.4427**	**14.5334**	**4.3141**	**0.0612**	**1.9775**	**0.1465**	**2.1240**	**0.5409**	**0.1401**	**0.6810**		**6,655.0458**	**6,655.0458**	**0.2800**	**1.0313**	**6,969.3755**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7963	29.7637	17.6698	0.0430		1.2743	1.2743		1.1892	1.1892		4,110.5322	4,110.5322	1.1153		4,138.4135
Total	**2.7963**	**29.7637**	**17.6698**	**0.0430**		**1.2743**	**1.2743**		**1.1892**	**1.1892**		**4,110.5322**	**4,110.5322**	**1.1153**		**4,138.4135**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0871	2.3905	0.8651	9.7100e-003	0.3332	0.0272	0.3603	0.0959	0.0260	0.1219		1,041.5055	1,041.5055	0.0279	0.1542	1,088.1624
Worker	0.6795	0.4712	5.6513	0.0156	1.8667	9.8000e-003	1.8765	0.4951	9.0200e-003	0.5041		1,587.4837	1,587.4837	0.0455	0.0450	1,602.0404
Total	**0.7665**	**2.8616**	**6.5164**	**0.0253**	**2.1998**	**0.0370**	**2.2368**	**0.5910**	**0.0350**	**0.6260**		**2,628.9891**	**2,628.9891**	**0.0734**	**0.1993**	**2,690.2028**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7963	29.7637	17.6698	0.0430		1.2743	1.2743		1.1892	1.1892	0.0000	4,110.5322	4,110.5322	1.1153		4,138.4135
Total	**2.7963**	**29.7637**	**17.6698**	**0.0430**		**1.2743**	**1.2743**		**1.1892**	**1.1892**	**0.0000**	**4,110.5322**	**4,110.5322**	**1.1153**		**4,138.4135**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0871	2.3905	0.8651	9.7100e-003	0.3332	0.0272	0.3603	0.0959	0.0260	0.1219		1,041.5055	1,041.5055	0.0279	0.1542	1,088.1624
Worker	0.6795	0.4712	5.6513	0.0156	1.8667	9.8000e-003	1.8765	0.4951	9.0200e-003	0.5041		1,587.4837	1,587.4837	0.0455	0.0450	1,602.0404
Total	**0.7665**	**2.8616**	**6.5164**	**0.0253**	**2.1998**	**0.0370**	**2.2368**	**0.5910**	**0.0350**	**0.6260**		**2,628.9891**	**2,628.9891**	**0.0734**	**0.1993**	**2,690.2028**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5519	26.2044	17.3471	0.0430		1.1169	1.1169		1.0422	1.0422		4,108.2392	4,108.2392	1.1101		4,135.9924
Total	**2.5519**	**26.2044**	**17.3471**	**0.0430**		**1.1169**	**1.1169**		**1.0422**	**1.0422**		**4,108.2392**	**4,108.2392**	**1.1101**		**4,135.9924**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0566	1.9265	0.7890	9.3300e-003	0.3332	0.0138	0.3469	0.0959	0.0132	0.1091		1,000.3947	1,000.3947	0.0259	0.1478	1,045.0953
Worker	0.6290	0.4143	5.1834	0.0151	1.8667	9.2200e-003	1.8759	0.4951	8.4900e-003	0.5035		1,545.7616	1,545.7616	0.0408	0.0414	1,559.1220
Total	**0.6857**	**2.3408**	**5.9723**	**0.0244**	**2.1998**	**0.0230**	**2.2228**	**0.5910**	**0.0217**	**0.6126**		**2,546.1563**	**2,546.1563**	**0.0667**	**0.1892**	**2,604.2174**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5519	26.2044	17.3471	0.0430		1.1169	1.1169		1.0422	1.0422	0.0000	4,108.2392	4,108.2392	1.1101		4,135.9924
Total	**2.5519**	**26.2044**	**17.3471**	**0.0430**		**1.1169**	**1.1169**		**1.0422**	**1.0422**	**0.0000**	**4,108.2392**	**4,108.2392**	**1.1101**		**4,135.9924**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0566	1.9265	0.7890	9.3300e-003	0.3332	0.0138	0.3469	0.0959	0.0132	0.1091		1,000.3947	1,000.3947	0.0259	0.1478	1,045.0953
Worker	0.6290	0.4143	5.1834	0.0151	1.8667	9.2200e-003	1.8759	0.4951	8.4900e-003	0.5035		1,545.7616	1,545.7616	0.0408	0.0414	1,559.1220
Total	**0.6857**	**2.3408**	**5.9723**	**0.0244**	**2.1998**	**0.0230**	**2.2228**	**0.5910**	**0.0217**	**0.6126**		**2,546.1563**	**2,546.1563**	**0.0667**	**0.1892**	**2,604.2174**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.5803					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6131**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0565	0.0372	0.4656	1.3600e-003	0.1677	8.3000e-004	0.1685	0.0445	7.6000e-004	0.0452		138.8409	138.8409	3.6600e-003	3.7200e-003	140.0409
Total	**0.0565**	**0.0372**	**0.4656**	**1.3600e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.6000e-004**	**0.0452**		**138.8409**	**138.8409**	**3.6600e-003**	**3.7200e-003**	**140.0409**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.5803					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6131**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0565	0.0372	0.4656	1.3600e-003	0.1677	8.3000e-004	0.1685	0.0445	7.6000e-004	0.0452		138.8409	138.8409	3.6600e-003	3.7200e-003	140.0409
Total	**0.0565**	**0.0372**	**0.4656**	**1.3600e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.6000e-004**	**0.0452**		**138.8409**	**138.8409**	**3.6600e-003**	**3.7200e-003**	**140.0409**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	49.8129					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944		375.2641	375.2641	0.0225		375.8253
Total	**50.0685**	**1.7373**	**2.4148**	**3.9600e-003**		**0.0944**	**0.0944**		**0.0944**	**0.0944**		**375.2641**	**375.2641**	**0.0225**		**375.8253**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1243	0.0819	1.0243	2.9800e-003	0.3689	1.8200e-003	0.3707	0.0978	1.6800e-003	0.0995		305.4499	305.4499	8.0600e-003	8.1800e-003	308.0900
Total	**0.1243**	**0.0819**	**1.0243**	**2.9800e-003**	**0.3689**	**1.8200e-003**	**0.3707**	**0.0978**	**1.6800e-003**	**0.0995**		**305.4499**	**305.4499**	**8.0600e-003**	**8.1800e-003**	**308.0900**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	49.8129					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944	0.0000	375.2641	375.2641	0.0225		375.8253
Total	**50.0685**	**1.7373**	**2.4148**	**3.9600e-003**		**0.0944**	**0.0944**		**0.0944**	**0.0944**	**0.0000**	**375.2641**	**375.2641**	**0.0225**		**375.8253**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1243	0.0819	1.0243	2.9800e-003	0.3689	1.8200e-003	0.3707	0.0978	1.6800e-003	0.0995		305.4499	305.4499	8.0600e-003	8.1800e-003	308.0900
Total	**0.1243**	**0.0819**	**1.0243**	**2.9800e-003**	**0.3689**	**1.8200e-003**	**0.3707**	**0.0978**	**1.6800e-003**	**0.0995**		**305.4499**	**305.4499**	**8.0600e-003**	**8.1800e-003**	**308.0900**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Parking Lot	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unrefrigerated Warehouse-No Rail	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.6310	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Unmitigated	4.6310	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.0948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0200e-003	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Total	**4.6310**	**4.9000e-004**	**0.0543**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1163**	**0.1163**	**3.1000e-004**		**0.1239**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.0948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0200e-003	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Total	**4.6310**	**4.9000e-004**	**0.0543**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1163**	**0.1163**	**3.1000e-004**		**0.1239**

7.0 Water Detail

7.1 Mitigation Measures Water

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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APPENDIX 3.2:

CALEEMOD OPERATIONAL EMISSIONS MODEL OUTPUTS

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Durst Drive Warehouse (Operations)

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	203.35	1000sqft	4.67	203,351.00	0
User Defined Industrial	203.35	User Defined Unit	0.00	0.00	0
Parking Lot	183.00	Space	1.10	48,110.00	0
Other Asphalt Surfaces	145.08	1000sqft	3.33	145,079.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Project area is 9.10 acres

Construction Phase - Operatiosn run only

Off-road Equipment - Operatiosn run only

Vehicle Trips - Trip rates based on ITE 11th Edition for High-Cube Transload Short-Term Warehouse (ITE Code 154)

Fleet Mix - Passenger Car Mix estimated based on the CalEEMod default fleet mix and the ratio of LDA, LDT1, LDT2, MDV, & MCY. Truck Mix based ratio of LHDT1, LHDT2, MHDT, and HHDT

Operational Off-Road Equipment - Based on SCAQMD High Cube Warehouse Truck Trip Study White Paper Summary of Busniess Survey Results (2014)

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	7/28/2022	6/30/2022
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.63
tblFleetMix	LDA	0.54	0.58
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.19
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.14
tblFleetMix	LHD2	7.1960e-003	0.00
tblFleetMix	LHD2	7.1960e-003	0.04
tblFleetMix	MCY	0.03	0.03
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.14	0.15
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	5.0710e-003	0.00
tblFleetMix	MH	5.0710e-003	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.20
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LandUseSquareFeet	73,200.00	48,110.00
tblLandUse	LotAcreage	1.65	1.10
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperHorsePower	97.00	200.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblVehicleTrips	CW_TL	16.60	40.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.74	0.79
tblVehicleTrips	ST_TR	0.00	0.15
tblVehicleTrips	SU_TR	1.74	0.73
tblVehicleTrips	SU_TR	0.00	0.14
tblVehicleTrips	WD_TR	1.74	1.18
tblVehicleTrips	WD_TR	0.00	0.23

2.0 Emissions Summary

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6329	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Energy	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
Mobile	1.1012	8.0770	12.3324	0.0627	3.7728	0.0908	3.8636	1.0255	0.0865	1.1120		6,652.6898	6,652.6898	0.2587	0.7364	6,878.6090
Offroad	0.1103	1.0361	0.7492	3.1700e-003		0.0376	0.0376		0.0346	0.0346	0.0000	306.5451	306.5451	0.0991		309.0237
Total	**5.8565**	**9.2236**	**13.2488**	**0.0666**	**3.7728**	**0.1370**	**3.9098**	**1.0255**	**0.1297**	**1.1552**	**0.0000**	**7,091.1396**	**7,091.1396**	**0.3608**	**0.7388**	**7,320.3308**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6329	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Energy	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
Mobile	1.1012	8.0770	12.3324	0.0627	3.7728	0.0908	3.8636	1.0255	0.0865	1.1120		6,652.6898	6,652.6898	0.2587	0.7364	6,878.6090
Offroad	0.1103	1.0361	0.7492	3.1700e-003		0.0376	0.0376		0.0346	0.0346	0.0000	306.5451	306.5451	0.0991		309.0237
Total	**5.8565**	**9.2236**	**13.2488**	**0.0666**	**3.7728**	**0.1370**	**3.9098**	**1.0255**	**0.1297**	**1.1552**	**0.0000**	**7,091.1396**	**7,091.1396**	**0.3608**	**0.7388**	**7,320.3308**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2022	6/30/2022	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Paving: 4.43

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.1012	8.0770	12.3324	0.0627	3.7728	0.0908	3.8636	1.0255	0.0865	1.1120		6,652.6898	6,652.6898	0.2587	0.7364	6,878.6090
Unmitigated	1.1012	8.0770	12.3324	0.0627	3.7728	0.0908	3.8636	1.0255	0.0865	1.1120		6,652.6898	6,652.6898	0.2587	0.7364	6,878.6090

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	239.00	160.30	148.36	920,608	920,608
User Defined Industrial	46.00	30.85	28.55	601,929	601,929
Total	285.00	191.15	176.92	1,522,537	1,522,537

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
User Defined Industrial	40.00	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Parking Lot	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Unrefrigerated Warehouse-No Rail	0.578100	0.060000	0.185300	0.149400	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.027200	0.000000	0.000000
User Defined Industrial	0.000000	0.000000	0.000000	0.000000	0.137300	0.036600	0.195700	0.630400	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
NaturalGas Unmitigated	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1119.82	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0121**	**0.1098**	**0.0922**	**6.6000e-004**		**8.3400e-003**	**8.3400e-003**		**8.3400e-003**	**8.3400e-003**		**131.7439**	**131.7439**	**2.5300e-003**	**2.4200e-003**	**132.5268**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.11982	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0121**	**0.1098**	**0.0922**	**6.6000e-004**		**8.3400e-003**	**8.3400e-003**		**8.3400e-003**	**8.3400e-003**		**131.7439**	**131.7439**	**2.5300e-003**	**2.4200e-003**	**132.5268**

6.0 Area Detail

6.1 Mitigation Measures Area

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.6329	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Unmitigated	4.6329	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.0948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9500e-003	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Total	**4.6329**	**6.8000e-004**	**0.0750**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**0.1608**	**0.1608**	**4.2000e-004**		**0.1714**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.0948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9500e-003	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Total	**4.6329**	**6.8000e-004**	**0.0750**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**0.1608**	**0.1608**	**4.2000e-004**		**0.1714**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Tractors/Loaders/Backhoes	1	4.00	365	200	0.37	CNG

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Tractors/Loaders/ Backhoes	0.1103	1.0361	0.7492	3.1700e-003		0.0376	0.0376		0.0346	0.0346	0.0000	306.5451	306.5451	0.0991		309.0237
Total	**0.1103**	**1.0361**	**0.7492**	**3.1700e-003**		**0.0376**	**0.0376**		**0.0346**	**0.0346**	**0.0000**	**306.5451**	**306.5451**	**0.0991**		**309.0237**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Durst Drive Warehouse (Operations)

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	203.35	1000sqft	4.67	203,351.00	0
User Defined Industrial	203.35	User Defined Unit	0.00	0.00	0
Parking Lot	183.00	Space	1.10	48,110.00	0
Other Asphalt Surfaces	145.08	1000sqft	3.33	145,079.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Project area is 9.10 acres

Construction Phase - Operatiosn run only

Off-road Equipment - Operatiosn run only

Vehicle Trips - Trip rates based on ITE 11th Edition for High-Cube Transload Short-Term Warehouse (ITE Code 154)

Fleet Mix - Passenger Car Mix estimated based on the CalEEMod default fleet mix and the ratio of LDA, LDT1, LDT2, MDV, & MCY. Truck Mix based ratio of LHDT1, LHDT2, MHDT, and HHDT

Operational Off-Road Equipment - Based on SCAQMD High Cube Warehouse Truck Trip Study White Paper Summary of Busniess Survey Results (2014)

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	7/28/2022	6/30/2022
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.63
tblFleetMix	LDA	0.54	0.58
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.19
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.14
tblFleetMix	LHD2	7.1960e-003	0.00
tblFleetMix	LHD2	7.1960e-003	0.04
tblFleetMix	MCY	0.03	0.03
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.14	0.15
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	5.0710e-003	0.00
tblFleetMix	MH	5.0710e-003	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.20
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LandUseSquareFeet	73,200.00	48,110.00
tblLandUse	LotAcreage	1.65	1.10
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperHorsePower	97.00	200.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblVehicleTrips	CW_TL	16.60	40.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.74	0.79
tblVehicleTrips	ST_TR	0.00	0.15
tblVehicleTrips	SU_TR	1.74	0.73
tblVehicleTrips	SU_TR	0.00	0.14
tblVehicleTrips	WD_TR	1.74	1.18
tblVehicleTrips	WD_TR	0.00	0.23

2.0 Emissions Summary

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6329	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Energy	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
Mobile	0.9852	8.4954	11.0905	0.0610	3.7728	0.0909	3.8636	1.0255	0.0866	1.1121		6,477.2384	6,477.2384	0.2602	0.7397	6,704.1869
Offroad	0.1103	1.0361	0.7492	3.1700e-003		0.0376	0.0376		0.0346	0.0346	0.0000	306.5451	306.5451	0.0991		309.0237
Total	**5.7405**	**9.6419**	**12.0069**	**0.0649**	**3.7728**	**0.1371**	**3.9098**	**1.0255**	**0.1297**	**1.1553**	**0.0000**	**6,915.6882**	**6,915.6882**	**0.3623**	**0.7422**	**7,145.9087**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6329	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Energy	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
Mobile	0.9852	8.4954	11.0905	0.0610	3.7728	0.0909	3.8636	1.0255	0.0866	1.1121		6,477.2384	6,477.2384	0.2602	0.7397	6,704.1869
Offroad	0.1103	1.0361	0.7492	3.1700e-003		0.0376	0.0376		0.0346	0.0346	0.0000	306.5451	306.5451	0.0991		309.0237
Total	**5.7405**	**9.6419**	**12.0069**	**0.0649**	**3.7728**	**0.1371**	**3.9098**	**1.0255**	**0.1297**	**1.1553**	**0.0000**	**6,915.6882**	**6,915.6882**	**0.3623**	**0.7422**	**7,145.9087**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2022	6/30/2022	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Paving: 4.43

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.9852	8.4954	11.0905	0.0610	3.7728	0.0909	3.8636	1.0255	0.0866	1.1121		6,477.2384	6,477.2384	0.2602	0.7397	6,704.1869
Unmitigated	0.9852	8.4954	11.0905	0.0610	3.7728	0.0909	3.8636	1.0255	0.0866	1.1121		6,477.2384	6,477.2384	0.2602	0.7397	6,704.1869

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	239.00	160.30	148.36	920,608	920,608
User Defined Industrial	46.00	30.85	28.55	601,929	601,929
Total	285.00	191.15	176.92	1,522,537	1,522,537

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
User Defined Industrial	40.00	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Parking Lot	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Unrefrigerated Warehouse-No Rail	0.578100	0.060000	0.185300	0.149400	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.027200	0.000000	0.000000
User Defined Industrial	0.000000	0.000000	0.000000	0.000000	0.137300	0.036600	0.195700	0.630400	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
NaturalGas Unmitigated	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1119.82	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0121**	**0.1098**	**0.0922**	**6.6000e-004**		**8.3400e-003**	**8.3400e-003**		**8.3400e-003**	**8.3400e-003**		**131.7439**	**131.7439**	**2.5300e-003**	**2.4200e-003**	**132.5268**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.11982	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0121**	**0.1098**	**0.0922**	**6.6000e-004**		**8.3400e-003**	**8.3400e-003**		**8.3400e-003**	**8.3400e-003**		**131.7439**	**131.7439**	**2.5300e-003**	**2.4200e-003**	**132.5268**

6.0 Area Detail

6.1 Mitigation Measures Area

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.6329	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Unmitigated	4.6329	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.0948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9500e-003	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Total	**4.6329**	**6.8000e-004**	**0.0750**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**0.1608**	**0.1608**	**4.2000e-004**		**0.1714**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.0948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9500e-003	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Total	**4.6329**	**6.8000e-004**	**0.0750**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**0.1608**	**0.1608**	**4.2000e-004**		**0.1714**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Tractors/Loaders/Backhoes	1	4.00	365	200	0.37	CNG

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Tractors/Loaders/ Backhoes	0.1103	1.0361	0.7492	3.1700e-003		0.0376	0.0376		0.0346	0.0346	0.0000	306.5451	306.5451	0.0991		309.0237
Total	**0.1103**	**1.0361**	**0.7492**	**3.1700e-003**		**0.0376**	**0.0376**		**0.0346**	**0.0346**	**0.0000**	**306.5451**	**306.5451**	**0.0991**		**309.0237**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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APPENDIX 3.3:

SCAQMD AMICUS BRIEF

S219783

IN THE SUPREME COURT OF C ALIFORNIA

SIERRA CLUB, REVIVE THE SAN JOAQUIN, and
LEAGUE OF WOMEN VOTERS OF FRESNO,

Plaintiffs and Appellants,

v.

COUNTY OF FRESNO,

Defendant and Respondent,

and,

FRIANT RANCH, L.P.,

Real Party in Interest and Respondent.

SUPREME COURT
FILED
APR 13 2015
Frank A. McGuire Clerk
Deputy

After a Published Decision by the Court of Appeal, filed May 27, 2014
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno
Case No. 11CECG00726
Honorable Rosendo A. Pena, Jr.

APPLICATION OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FOR LEAVE TO FILE BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY AND *[PROPOSED]* BRIEF OF *AMICUS CURIAE*

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Bakersfield Citizens for Local Control v. City of Bakersfield (2004)
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Berkeley Keep Jets Over the Bay v. Board of Port Commissioners
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Center for Biological Diversity v. County of San Bernardino (2010)
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Citizens of Goleta Valley v. Bd. of Supervisors (1990)
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County of Amador v. El Dorado County Water Agency (1999)
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Crocker National Bank v. City and County of San Francisco (1989)
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Ebbetts Pass Forest Watch v. California Dept. of Forestry & Fire
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Fall River Wild Trout Foundation v. County of Shasta, (1999)
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Gray v. County of Madera (2008)
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Laurel Heights Improvement Assn. v.
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Neighbors for Smart Rail v. Exposition Metro Line (2013)
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State Cases (cont'd)

Orange County Air Pollution Control District v. Public Util. Com. (1971) 4 Cal.3d 945 27

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Schenck v. County of Sonoma (2011) 198 Cal.App.4th 949 ..... 26, 27

Sierra Club v. County of Fresno (2014) 226 Cal.App.4th 704 (superseded by grant of review) 172 Cal.Rptr.3d 271 ..... 9, 23

Sierra Club v. State Bd. Of Forestry (1994) 7 Cal.4th 1215 28

Uphold Our Heritage v. Town of Woodside (2007) 147 Cal.App.4th 587 20

Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova (2007) 40 Cal.4th 412 ..... 1, 17, 19, 24, 25, 26

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California Statutes

Health & Saf. Code § 39666 5
Health & Saf. Code § 40000 3
Health & Saf. Code § 40001 3
Health & Saf. Code § 40410 3
Health & Saf. Code §§ 40460, et seq 4
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SCAQMD, *Final Subsequent Mitigated Negative Declaration for: Warren E&P, Inc. WTU Central Facility, New Equipment Project (certified July 19, 2011)* 14-15

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TO THE HONORABLE CHIEF JUSTICE AND JUSTICES OF THE SUPREME COURT:

APPLICATION FOR LEAVE TO FILE *AMICUS CURIAE* BRIEF

Pursuant to Rule 8.520(f) of the California Rules of Court, the South Coast Air Quality Management District (SCAQMD) respectfully requests leave to file the attached *amicus curiae* brief. Because SCAQMD's position differs from that of either party, we request leave to submit this amicus brief in support of neither party.

HOW THIS BRIEF WILL ASSIST THE COURT

SCAQMD's proposed amicus brief takes a position on two of the issues in this case. In both instances, its position differs from that of either party. The issues are:

1) Does the California Environmental Quality Act (CEQA) require an environmental impact report (EIR) to correlate a project's air pollution emissions with specific levels of health impacts?
2) What is the proper standard of review for determining whether an EIR provides sufficient information on the health impacts caused by a project's emission of air pollutants?

This brief will assist the Court by discussing the practical realities of correlating identified air quality impacts with specific health outcomes. In short, CEQA requires agencies to provide detailed information about a project's air quality impacts that is sufficient for the public and decisionmakers to adequately evaluate the project and meaningfully understand its impacts. However, the level of analysis is governed by a rule of reason; CEQA only requires agencies to conduct analysis if it is reasonably feasible to do so.

With regard to health-related air quality impacts, an analysis that correlates a project's air pollution emissions with specific levels of health impacts will be feasible in some cases but not others. Whether it is feasible depends on a variety of factors, including the nature of the project and the nature of the analysis under consideration. The feasibility of analysis may also change over time as air districts and others develop new tools for measuring projects' air quality related health impacts. Because SCAQMD has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, it is uniquely situated to express an opinion on the extent to which the Court should hold that CEQA requires lead agencies to correlate air quality impacts with specific health outcomes.

SCAQMD can also offer a unique perspective on the question of the appropriate standard of review. SCAQMD submits that the proper standard of review for determining whether an EIR is sufficient as an informational document is more nuanced than argued by either party. In our view, this is a mixed question of fact and law. It includes determining whether additional analysis is feasible, which is primarily a factual question that should be reviewed under the substantial evidence standard. However, it also involves determining whether the omission of a particular analysis renders an EIR insufficient to serve CEQA's purpose as a meaningful, informational document. If a lead agency has not determined that a requested analysis is infeasible, it is the court's role to determine whether the EIR nevertheless meets CEQA's purposes, and courts should not defer to the lead agency's conclusions regarding the legal sufficiency of an EIR's analysis. The ultimate question of whether an EIR's analysis is "sufficient" to serve CEQA's informational purposes is predominately a question of law that courts should review de novo.

This brief will explain the rationale for these arguments and may assist the Court in reaching a conclusion that accords proper respect to a lead agency's factual conclusions while maintaining judicial authority over the ultimate question of what level of analysis CEQA requires.

STATEMENT OF INTEREST OF *AMICUS CURIAE*

The SCAQMD is the regional agency primarily responsible for air pollution control in the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of the Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410; Cal. Code Regs., tit. 17, § 60104.) The SCAQMD participates in the CEQA process in several ways. Sometimes it acts as a lead agency that prepares CEQA documents for projects. Other times it acts as a responsible agency when it has permit authority over some part of a project that is undergoing CEQA review by a different lead agency. Finally, SCAQMD also acts as a commenting agency for CEQA documents that it receives because it is a public agency with jurisdiction by law over natural resources affected by the project.

In all of these capacities, SCAQMD will be affected by the decision in this case. SCAQMD sometimes submits comments requesting that a lead agency perform an additional type of air quality or health impacts analysis. On the other hand, SCAQMD sometimes determines that a particular type of health impact analysis is not feasible or would not produce reliable and informative results. Thus, SCAQMD will be affected by the Court's resolution of the extent to which CEQA requires EIRs to correlate emissions and health impacts, and its resolution of the proper standard of review.

CERTIFICATION REGARDING AUTHORSHIP AND FUNDING

No party or counsel in the pending case authored the proposed amicus curiae brief in whole or in part, or made any monetary contribution intended to fund the preparation or submission of the brief. No person or entity other than the proposed *Amicus Curiae* made any monetary contribution intended to fund the preparation or submission of the brief.

Respectfully submitted,

DATED: April 3, 2015

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BRIEF OF AMICUS CURIAE

SUMMARY OF ARGUMENT

The South Coast Air Quality Management District (SCAQMD) submits that this Court should not try to establish a hard-and-fast rule concerning whether lead agencies are required to correlate emissions of air pollutants with specific health consequences in their environmental impact reports (EIR). The level of detail required in EIRs is governed by a few, core CEQA (California Environmental Quality Act) principles. As this Court has stated, "[a]n EIR must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project." (*Laurel Heights Improvement Assn. v. Regents of the Univ of Cal.* (1988) 47 Cal.3d 376, 405 ["*Laurel Heights I*"]) Accordingly, "an agency must use its best efforts to find out and disclose all that it reasonably can." (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 428 (quoting CEQA Guidelines § 15144)[1].). However, "[a]nalysis of environmental effects need not be exhaustive, but will be judged in light of what is reasonably feasible." (*Association of Irritated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383, 1390; CEQA Guidelines §§ 15151, 15204(a).)

With regard to analysis of air quality related health impacts, EIRs must generally quantify a project's pollutant emissions, but in some cases it is not feasible to correlate these emissions to specific, quantifiable health impacts (e.g., premature mortality; hospital admissions). In such cases, a general description of the adverse health impacts resulting from the pollutants at issue may be sufficient. In other cases, due to the magnitude

[1] The CEQA Guidelines are found at Cal. Code Regs., tit. 14 §§ 15000, *et seq.*

or nature of the pollution emissions, as well as the specificity of the project involved, it may be feasible to quantify health impacts. Or there may be a less exacting, but still meaningful analysis of health impacts that can feasibly be performed. In these instances, agencies should disclose those impacts.

SCAQMD also submits that whether or not an EIR complies with CEQA's informational mandates by providing sufficient, feasible analysis is a mixed question of fact and law. Pertinent here, the question of whether an EIR's discussion of health impacts from air pollution is sufficient to allow the public to understand and consider meaningfully the issues involves two inquiries: (1) Is it feasible to provide the information or analysis that a commenter is requesting or a petitioner is arguing should be required?; and (2) Even if it is feasible, is the agency relying on other policy or legal considerations to justify not preparing the requested analysis? The first question of whether an analysis is feasible is primarily a question of fact that should be judged by the substantial evidence standard. The second inquiry involves evaluating CEQA's information disclosure purposes against the asserted reasons to not perform the requested analysis. For example, an agency might believe that its EIR meets CEQA's informational disclosure standards even without a particular analysis, and therefore choose not to conduct that analysis. SCAQMD submits that this is more of a legal question, which should be reviewed de novo as a question of law.

ARGUMENT

I. RELEVANT FACTUAL AND LEGAL FRAMEWORK.

A. Air Quality Regulatory Background

The South Coast Air Quality Management District (SCAQMD) is one of the local and regional air pollution control districts and air quality

management districts in California. The SCAQMD is the regional air pollution agency for the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410, 17 Cal. Code Reg. § 60104.) The SCAQMD also includes the Coachella Valley in Riverside County (Palm Springs area to the Salton Sea). (SCAQMD, *Final 2012 AQMP (Feb. 2013)*, http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan; then follow "chapter 7" hyperlink; pp 7-1, 7-3 (last visited Apr. 1, 2015).) The SCAQMD's jurisdiction includes over 16 million residents and has the worst or nearly the worst air pollution levels in the country for ozone and fine particulate matter. (SCAQMD, *Final 2012 AQMP (Feb. 2013)*, http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan; then follow "Executive Summary" hyperlink p. ES-1 (last visited Apr. 1, 2015).)

Under California law, the local and regional districts are primarily responsible for controlling air pollution from all sources except motor vehicles. (Health & Saf. Code § 40000.) The California Air Resources Board (CARB), part of the California Environmental Protection Agency, is primarily responsible for controlling pollution from motor vehicles. (*Id.*) The air districts must adopt rules to achieve and maintain the state and federal ambient air quality standards within their jurisdictions. (Health & Saf. Code § 40001.)

The federal Clean Air Act (CAA) requires the United States Environmental Protection Agency (EPA) to identify pollutants that are widely distributed and pose a threat to human health, developing a so-called "criteria" document. (42 U.S.C. § 7408; CAA § 108.) These pollutants are frequently called "criteria pollutants." EPA must then establish "national ambient air quality standards" at levels "requisite to protect public health",

allowing "an adequate margin of safety." (42 U.S.C. § 7409; CAA § 109.) EPA has set standards for six identified pollutants: ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, particulate matter (PM), and lead. (U.S. EPA, National Ambient Air Quality Standards (NAAQS), http://www.epa.gov/air/criteria.html (last updated Oct. 21, 2014).)[2]

Under the Clean Air Act, EPA sets emission standards for motor vehicles and "nonroad engines" (mobile farm and construction equipment, marine vessels, locomotives, aircraft, etc.). (42 U.S.C. §§ 7521, 7547; CAA §§ 202, 213.) California is the only state allowed to establish emission standards for motor vehicles and most nonroad sources; however, it may only do so with EPA's approval. (42 U.S.C. §§ 7543(b), 7543(e); CAA §§ 209(b), 209(c).) Sources such as manufacturing facilities, power plants and refineries that are not mobile are often referred to as "stationary sources." The Clean Air Act charges state and local agencies with the primary responsibility to attain the national ambient air quality standards. (42 U.S.C. § 7401(a)(3); CAA § 101(a)(3).) Each state must adopt and implement a plan including enforceable measures to achieve and maintain the national ambient air quality standards. (42 U.S.C. § 7410; CAA § 110.) The SCAQMD and CARB jointly prepare portion of the plan for the South Coast Air Basin and submit it for approval by EPA. (Health & Saf. Code §§ 40460, et seq.)

The Clean Air Act also requires state and local agencies to adopt a permit program requiring, among other things, that new or modified "major" stationary sources use technology to achieve the "lowest achievable emission rate," and to control minor stationary sources as

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[2] Particulate matter (PM) is further divided into two categories: fine particulate or $PM_{2.5}$ (particles with a diameter of less than or equal to 2.5 microns) and coarse particulate (PM_{10}) (particles with a diameter of 10 microns or less). (U.S. EPA, Particulate Matter (PM), http://www.epa.gov/airquality/particlepollution/ (last visited Apr. 1, 2015).)

needed to help attain the standards. (42 U.S.C. §§ 7502(c)(5), 7503(a)(2), 7410(a)(2)(C); CAA §§ 172(c)(5), 173(a)(2), 110(a)(2)(C).) The air districts implement these permit programs in California. (Health & Saf. Code §§ 42300, et seq.)

The Clean Air Act also sets out a regulatory structure for over 100 so-called "hazardous air pollutants" calling for EPA to establish "maximum achievable control technology" (MACT) for sources of these pollutants. (42 U.S.C. § 7412(d)(2); CAA § 112(d)(2).) California refers to these pollutants as "toxic air contaminants" (TACs) which are subject to two state-required programs. The first program requires "air toxics control measures" for specific categories of sources. (Health & Saf. Code § 39666.) The other program requires larger stationary sources and sources identified by air districts to prepare "health risk assessments" for impacts of toxic air contaminants. (Health & Saf. Code §§ 44320(b), 44322, 44360.) If the health risk exceeds levels identified by the district as "significant," the facility must implement a "risk reduction plan" to bring its risk levels below "significant" levels. Air districts may adopt additional more stringent requirements than those required by state law, including requirements for toxic air contaminants. (Health & Saf. Code § 41508; *Western Oil & Gas Assn. v. Monterey Bay Unified APCD* (1989) 49 Cal.3d 408, 414.) For example, SCAQMD has adopted a rule requiring new or modified sources to keep their risks below specified levels and use best available control technology (BACT) for toxics. (SCAQMD, *Rule 1401-New Source Review of Toxic Air Contaminants*, http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiv; then follow "Rule 1401" hyperlink (last visited Apr. 1, 2015).)

B. The SCAQMD's Role Under CEQA

The California Environmental Quality Act (CEQA) requires public agencies to perform an environmental review and appropriate analysis for projects that they implement or approve. (Pub. Resources Code § 21080(a).) The agency with primary approval authority for a particular project is generally the "lead agency" that prepares the appropriate CEQA document. (CEQA Guidelines §§ 15050, 15051.) Other agencies having a subsequent approval authority over all or part of a project are called "responsible" agencies that must determine whether the CEQA document is adequate for their use. (CEQA Guidelines §§ 15096(c), 15381.) Lead agencies must also consult with and circulate their environmental impact reports to "trustee agencies" and agencies "with jurisdiction by law" including "authority over resources which may be affected by the project." (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines §§ 15086(a)(3), 15073(c).) The SCAQMD has a role in all these aspects of CEQA.

Fulfilling its responsibilities to implement its air quality plan and adopt rules to attain the national ambient air quality standards, SCAQMD adopts a dozen or more rules each year to require pollution reductions from a wide variety of sources. The SCAQMD staff evaluates each rule for any adverse environmental impact and prepares the appropriate CEQA document. Although most rules reduce air emissions, they may have secondary environmental impacts such as use of water or energy or disposal of waste—e.g., spent catalyst from control equipment.[3]

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[3] The SCAQMD's CEQA program for its rules is a "Certified Regulatory Program" under which it prepares a "functionally equivalent" document in lieu of a negative declaration or EIR. (Pub. Resources Code § 21080.5, CEQA Guidelines § 15251(l).)

The SCAQMD also approves a large number of permits every year to construct new, modified, or replacement facilities that emit regulated air pollutants. The majority of these air pollutant sources have already been included in an earlier CEQA evaluation for a larger project, are currently being evaluated by a local government as lead agency, or qualify for an exemption. However, the SCAQMD sometimes acts as lead agency for major projects where the local government does not have a discretionary approval. In such cases, SCAQMD prepares and certifies a negative declaration or environmental impact report (EIR) as appropriate.[4] SCAQMD evaluates perhaps a dozen such permit projects under CEQA each year. SCAQMD is often also a "responsible agency" for many projects since it must issue a permit for part of the projects (e.g., a boiler used to provide heat in a commercial building). For permit projects evaluated by another lead agency under CEQA, SCAQMD has the right to determine that the CEQA document is inadequate for its purposes as a responsible agency, but it may not do so because its permit program already requires all permitted sources to use the best available air pollution control technology. (SCAQMD, *Rule 1303(a)(1) – Requirements*, http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiii; then follow "Rule 1303" hyperlink (last visited Apr. 1, 2015).)

Finally, SCAQMD receives as many as 60 or more CEQA documents each month (around 500 per year) in its role as commenting agency or an agency with "jurisdiction by law" over air quality—a natural resource affected by the project. (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines § 15366(a)(3).) The SCAQMD staff provides comments on as many as 25 or 30 such documents each month.

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[4] The SCAQMD's permit projects are not included in its Certified Regulatory Program, and are evaluated under the traditional local government CEQA analysis. (Pub. Resources Code §§ 21150-21154.)

(SCAQMD Governing Board Agenda, Apr. 3, 2015, Agenda Item 16, Attachment A, http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-april-3-2015; then follow "16. Lead Agency Projects and Environmental Documents Received by SCAQMD" hyperlink (last visited Apr. 1, 2015).) Of course, SCAQMD focuses its commenting efforts on the more significant projects.

Typically, SCAQMD comments on the adequacy of air quality analysis, appropriateness of assumptions and methodology, and completeness of the recommended air quality mitigation measures. Staff may comment on the need to prepare a health risk assessment detailing the projected cancer and noncancer risks from toxic air contaminants resulting from the project, particularly the impacts of diesel particulate matter, which CARB has identified as a toxic air contaminant based on its carcinogenic effects. (California Air Resources Board, Resolution 98-35, Aug. 27, 1998, http://www.arb.ca.gov/regact/diesltac/diesltac.htm; then follow Resolution 98-35 hyperlink (last visited Apr. 1, 2015).) Because SCAQMD already requires new or modified stationary sources of toxic air contaminants to use the best available control technology for toxics and to keep their risks below specified levels, (SCAQMD Rule 1401, supra, note 15), the greatest opportunity to further mitigate toxic impacts through the CEQA process is by reducing emissions—particularly diesel emissions—from vehicles.

II. THIS COURT SHOULD NOT SET A HARD-AND-FAST RULE CONCERNING THE EXTENT TO WHICH AN EIR MUST CORRELATE A PROJECT'S EMISSION OF POLLUTANTS WITH RESULTING HEALTH IMPACTS.

Numerous cases hold that courts do not review the correctness of an EIR's conclusions but rather its sufficiency as an informative document. (*Laurel Heights 1, supra*, 47 Cal.3d at p. 392; *Citizens of Goleta Valley v.*

Bd. of Supervisors (1990) 52 Cal.3d 553, 569; *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1197.)

As stated by the Court of Appeal in this case, where an EIR has addressed a topic, but the petitioner claims that the information provided about that topic is insufficient, courts must "draw[] a line that divides *sufficient* discussions from those that are *insufficient*." (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4th 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) The Court of Appeal readily admitted that "[t]he terms themselves – sufficient and insufficient – provide little, if any, guidance as to where the line should be drawn. They are simply labels applied once the court has completed its analysis." (*Id.*)

The CEQA Guidelines, however, provide guidance regarding what constitutes a sufficient discussion of impacts. Section 15151 states that "the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible." Case law reflects this: "Analysis of environmental effects need not be exhaustive, but will be judged in light of what was reasonably feasible." (*Association of Irritated Residents v. County of Madera, supra,* 107 Cal.App.4th at p. 1390; see also CEQA Guidelines § 15204(a).)

Applying this test, this Court cannot realistically establish a hard-and-fast rule that an analysis correlating air pollution impacts of a project to quantified resulting health impacts is always required, or indeed that it is never required. Simply put, in some cases such an analysis will be "feasible"; in some cases it will not.

For example, air pollution control districts often require a proposed new source of toxic air contaminants to prepare a "health risk assessment" before issuing a permit to construct. District rules often limit the allowable cancer risk the new source may cause to the "maximally exposed individual" (worker and residence exposures). (*See, e.g.*, SCAQMD Rule 1401(c)(8); 1401(d)(1), *supra* note 15.) In order to perform this analysis, it

is necessary to have data regarding the sources and types of air toxic contaminants, location of emission points, velocity of emissions, the meteorology and topography of the area, and the location of receptors (worker and residence). (SCAQMD, *Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588), pp. 11-16*; (last visited Apr. 1, 2015) http://www.aqmd.gov/home/library/documents-support-material; "Guidelines" hyperlink; AB2588; then follow AB2588 Risk Assessment Guidelines hyperlink.)

Thus, it is feasible to determine the health risk posed by a new gas station locating at an intersection in a mixed use area, where receptor locations are known. On the other hand, it may not be feasible to perform a health risk assessment for airborne toxics that will be emitted by a generic industrial building that was built on "speculation" (i.e., without knowing the future tenant(s)). Even where a health risk assessment can be prepared, however, the resulting maximum health risk value is only a calculation of risk—it does not necessarily mean anyone will contract cancer as a result of the project.

In order to find the "cancer burden" or expected additional cases of cancer resulting from the project, it is also necessary to know the numbers and location of individuals living within the "zone of impact" of the project: i.e., those living in areas where the projected cancer risk from the project exceeds one in a million. (SCAQMD, Health Risk Assessment Summary form, http://www.aqmd.gov/home/forms ; filter by "AB2588" category; then "Health Risk Assessment" hyperlink (last visited Apr. 1, 2015).) The affected population is divided into bands of those exposed to at least 1 in a million risk, those exposed to at least 10 in a million risk, etc. up to those exposed at the highest levels. (*Id.*) This data allows agencies to calculate an approximate number of additional cancer cases expected from

the project. However, it is not possible to predict which particular individuals will be affected.

For the so-called criteria pollutants[5], such as ozone, it may be more difficult to quantify health impacts. Ozone is formed in the atmosphere from the chemical reaction of the nitrogen oxides (NO_x) and volatile organic compounds (VOC) in the presence of sunlight. (U.S. EPA, Ground Level Ozone, http://www.epa.gov/airquality/ozonepollution/ (last updated Mar. 25, 2015).) It takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources. (U.S. EPA, *Guideline on Ozone Monitoring Site Selection* (Aug. 1998) EPA-454/R-98-002 § 5.1.2, http://www.epa.gov/ttnamti1/archive/cpreldoc.html (last visited Apr. 1, 2015).) NO_x and VOC are known as "precursors" of ozone.

Scientifically, health effects from ozone are correlated with increases in the ambient level of ozone in the air a person breathes. (U.S. EPA, *Health Effects of Ozone in the General Population,* Figure 9, http://www.epa.gov/apti/ozonehealth/population.html#levels (last visited Apr. 1, 2015).) However, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region. For example, the SCAQMD's 2012 AQMP showed that reducing NO_x by 432 tons per day (157,680 tons/year) and reducing VOC by 187 tons per day (68,255 tons/year) would reduce ozone levels at the SCAQMD's monitor site with the highest levels by only 9 parts per billion. (South Coast Air Quality Management District, *Final 2012 AQMP (February 2013)*, http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan; then follow "Appendix V: Modeling & Attainment Demonstrations" hyperlink,

[5] See discussion of types of pollutants, supra, Part I.A.

pp. v-4-2, v-7-4, v-7-24.) SCAQMD staff does not currently know of a way to accurately quantify ozone-related health impacts caused by NO_x or VOC emissions from relatively small projects.

On the other hand, this type of analysis may be feasible for projects on a regional scale with very high emissions of NO_x and VOCs, where impacts are regional. For example, in 2011 the SCAQMD performed a health impact analysis in its CEQA document for proposed Rule 1315, which authorized various newly-permitted sources to use offsets from the districts "internal bank" of emission reductions. This CEQA analysis accounted for essentially *all* the increases in emissions due to new or modified sources in the District between 2010 and 2030.[6] The SCAQMD was able to correlate this very large emissions increase (e.g., 6,620 pounds per day NO_x (1,208 tons per year), 89,180 pounds per day VOC (16,275 tons per year)) to expected health outcomes from ozone and particulate matter (e.g., 20 premature deaths per year and 89,947 school absences in the year 2030 due to ozone).[7] (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System* (see hyperlink in fn 6*)* at p. 4.1-35, Table 4.1-29.)

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[6] (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, Attachment G, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System, Vol. 1, p.4.0-6,* http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-february-4-2011; the follow "26. Adopt Proposed Rule 1315 – Federal New Source Review Tracking System" (last visited April 1, 2015).)

[7] The SCAQMD was able to establish the location of future NO_x and VOC emissions by assuming that new projects would be built in the same locations and proportions as existing stationary sources. This CEQA document was upheld by the Los Angeles County Superior Court in *Natural Res. Def. Council v SCAQMD*, Los Angeles Superior Court No. BS110792).

However, a project emitting only 10 tons per year of NO_x or VOC is small enough that its regional impact on ambient ozone levels may not be detected in the regional air quality models that are currently used to determine ozone levels. Thus, in this case it would not be feasible to directly correlate project emissions of VOC or NO_x with specific health impacts from ozone. This is in part because ozone formation is not linearly related to emissions. Ozone impacts vary depending on the location of the emissions, the location of other precursor emissions, meteorology and seasonal impacts, and because ozone is formed some time later and downwind from the actual emission. (EPA Guideline on Ozone Monitoring Site Selection (Aug. 1998) EPA-454/R-98-002, § 5.1.2; https://www.epa.gov/ttnamti1/archive/cpreldoc.html; then search "Guideline on Ozone Monitoring Site Selection" click on pdf) (last viewed Apr. 1, 2015).)

SCAQMD has set its CEQA "significance" threshold for NO_x and VOC at 10 tons per year (expressed as 55 lb/day). (SCAQMD, *Air Quality Analysis Handbook*, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook; then follow "SCAQMD Air Quality Significance Thresholds" hyperlink (last visited Apr. 1, 2015).) This is because the federal Clean Air Act defines a "major" stationary source for "extreme" ozone nonattainment areas such as SCAQMD as one emitting 10 tons/year. (42 U.S.C. §§ 7511a(e), 7511a(f); CAA §§ 182(e), 182(f).) Under the Clean Air Act, such sources are subject to enhanced control requirements (42 U.S.C. §§ 7502(c)(5), 7503; CAA §§ 172(c)(5), 173), so SCAQMD decided this was an appropriate threshold for making a CEQA "significance" finding and requiring feasible mitigation. Essentially, SCAQMD takes the position that a source that emits 10 tons/year of NO_x or VOC would contribute cumulatively to ozone formation. Therefore, lead agencies that use SCAQMD's thresholds of significance may determine

that many projects have "significant" air quality impacts and must apply all feasible mitigation measures, yet will not be able to precisely correlate the project to quantifiable health impacts, unless the emissions are sufficiently high to use a regional modeling program.

In the case of particulate matter ($PM_{2.5}$)[8], another "criteria" pollutant, SCAQMD staff is aware of two possible methods of analysis. SCAQMD used regional modeling to predict expected health impacts from its proposed Rule 1315, as mentioned above. Also, the California Air Resources Board (CARB) has developed a methodology that can predict expected mortality (premature deaths) from large amounts of $PM_{2.5}$. (California Air Resources Board, *Health Impacts Analysis: PM Premature Death Relationship*, http://www.arb.ca.gov/research/health/pm-mort/pm-mort_arch.htm (last reviewed Jan. 19, 2012).) SCAQMD used the CARB methodology to predict impacts from three very large power plants (e.g., 731-1837 lbs/day). (Final Environmental Assessment for Rule 1315, *supra*, pp 4.0-12, 4.1-13, 4.1-37 (e.g., 125 premature deaths in the entire SCAQMD in 2030), 4.1-39 (0.05 to 1.77 annual premature deaths from power plants.) Again, this project involved large amounts of additional $PM_{2.5}$ in the District, up to 2.82 tons/day (5,650 lbs/day of $PM_{2.5}$, or, or 1029 tons/year. (*Id.* at table 4.1-4, p. 4.1-10.)

However, the primary author of the CARB methodology has reported that this $PM_{2.5}$ health impact methodology is not suited for small projects and may yield unreliable results due to various uncertainties. [9] (SCAQMD, *Final Subsequent Mitigated Negative Declaration for: Warren*

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[8] SCAQMD has not attained the latest annual or 24-hour national ambient air quality standards for "$PM_{2.5}$" or particulate matter less than 2.5 microns in diameter.

[9] Among these uncertainties are the representativeness of the population used in the methodology, and the specific source of PM and the corresponding health impacts. (*Id.* at p. 2-24.)

E&P, Inc. WTU Central Facility, New Equipment Project (certified July 19, 2011), http://www.aqmd.gov/home/library/documents-support-material/lead-agency-permit-projects/permit-project-documents---year-2011; then follow "Final Subsequent Mitigated Negative Declaration for Warren E&P Inc. WTU Central Facility, New Equipment Project" hyperlink, pp. 2-22, 2-23 (last visited Apr. 1, 2015).) Therefore, when SCAQMD prepared a CEQA document for the expansion of an existing oil production facility, with very small $PM_{2.5}$ increases (3.8 lb/day) and a very small affected population, staff elected not to use the CARB methodology for using estimated $PM_{2.5}$ emissions to derive a projected premature mortality number and explained why it would be inappropriate to do so. (*Id.* at pp 2-22 to 2-24.) SCAQMD staff concluded that use of this methodology for such a small source could result in unreliable findings and would not provide meaningful information. (*Id.* at pp. 2-23, 2-25.) This CEQA document was not challenged in court.

In the above case, while it may have been technically possible to plug the data into the methodology, the results would not have been reliable or meaningful. SCAQMD believes that an agency should not be required to perform analyses that do not produce reliable or meaningful results. This Court has already held that an agency may decline to use even the "normal" "existing conditions" CEQA baseline where to do so would be misleading or without informational value. (*Neighbors for Smart Rail v. Exposition Metro Line* (2013) 57 Cal.4th 439, 448, 457.) The same should be true for a decision that a particular study or analysis would not provide reliable or meaningful results.[10]

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[10] Whether a particular study would result in "informational value" is a part of deciding whether it is "feasible." CEQA defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and

Therefore, it is not possible to set a hard-and-fast rule on whether a correlation of air quality impacts with specific quantifiable health impacts is required in all cases. Instead, the result turns on whether such an analysis is reasonably feasible in the particular case.[11] Moreover, what is reasonably feasible may change over time as scientists and regulatory agencies continually seek to improve their ability to predict health impacts. For example, CARB staff has been directed by its Governing Board to reassess and improve the methodology for estimating premature deaths. (California Air Resources Board, *Health Impacts Analysis: PM Mortality Relationship*, http://www.arb.ca.gov/research/health/pm-mort/pm-mort.htm (last reviewed Dec. 29, 2010).) This factor also counsels against setting any hard-and-fast rule in this case.

III. THE QUESTION OF WHETHER AN EIR CONTAINS SUFFICIENT ANALYSIS TO MEET CEQA'S REQUIREMENTS IS A MIXED QUESTION OF FACT AND LAW GOVERNED BY TWO DIFFERENT STANDARDS OF REVIEW.

A. Standard of Review for Feasibility Determination and Sufficiency as an Informative Document

A second issue in this case is whether courts should review an EIR's informational sufficiency under the "substantial evidence" test as argued by Friant Ranch or the "independent judgment" test as argued by Sierra Club.

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technological factors." (Pub. Resources Code § 21061.1.) A study cannot be "accomplished in a *successful* manner" if it produces unreliable or misleading results.

[11] In this case, the lead agency did not have an opportunity to determine whether the requested analysis was feasible because the comment was non-specific. Therefore, SCAQMD suggests that this Court, after resolving the legal issues in the case, direct the Court of Appeal to remand the case to the lead agency for a determination of whether the requested analysis is feasible. Because Fresno County, the lead agency, did not seek review in this Court, it seems likely that the County has concluded that at least some level of correlation of air pollution with health impacts is feasible.

As this Court has explained, "a reviewing court must adjust its scrutiny to the nature of the alleged defect, depending on whether the claim is predominantly one of improper procedure or a dispute over the facts." (*Vineyard Area Citizens v. City of Rancho Cordova, supra,* 40 Cal.4th at 435.) For questions regarding compliance with proper procedure or other legal questions, courts review an agency's action de novo under the "independent judgment" test. (*Id.*) On the other hand, courts review factual disputes only for substantial evidence, thereby "accord[ing] greater deference to the agency's substantive factual conclusions." (*Id.*)

Here, Friant Ranch and Sierra Club agree that the case involves the question of whether an EIR includes sufficient information regarding a project's impacts. However, they disagree on the proper standard of review for answering this question: Sierra Club contends that courts use the independent judgment standard to determine whether an EIR's analysis is sufficient to meet CEQA's informational purposes,[12] while Friant Ranch contends that the substantial evidence standard applies to this question.

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[12] Sierra Club acknowledges that courts use the substantial evidence standard when reviewing predicate factual issues, but argues that courts ultimately decide as a matter of law what CEQA requires. (Answering Brief, pp. 14, 23.)

SCAQMD submits that the issue is more nuanced than either party contends. We submit that, whether a CEQA document includes sufficient analysis to satisfy CEQA's informational mandates is a mixed question of fact and law,[13] containing two levels of inquiry that should be judged by different standards.[14]

The state CEQA Guidelines set forth standards for the adequacy of environmental analysis. Guidelines Section 15151 states:

> An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good-faith effort at full disclosure.

In this case, the basic question is whether the underlying analysis of air quality impacts made the EIR "sufficient" as an informative document. However, whether the EIR's analysis was sufficient is judged in light of what was reasonably feasible. This represents a mixed question of fact and law that is governed by two different standards of review.

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[13] Friant Ranch actually states that the claim that an EIR lacks sufficient relevant information is, "most properly thought of as raising mixed questions of fact and law." (Opening Brief, p. 27.) However, the remainder of its argument claims that the court should apply the substantial evidence standard of review to all aspects of the issue.

[14] Mixed questions of fact and law issues may implicate predominantly factual subordinate questions that are reviewed under the substantial evidence test even though the ultimate question may be reviewed by the independent judgment test. *Crocker National Bank v. City and County of San Francisco* (1989) 49 Cal.3d 881, 888-889.

SCAQMD submits that an EIR's sufficiency as an informational document is ultimately a legal question that courts should determine using their independent judgment. This Court's language in *Laurel Heights I* supports this position. As this Court explained: "The court does not pass upon the correctness of the EIR's environmental conclusions, but only upon its *sufficiency as an informative document.*" (*Laurel Heights I, supra,* 47 Cal.3d at 392-393) (emphasis added.) As described above, the Court in *Vineyard Area Citizens v. City of Rancho Cordova, supra,* 40 Cal.4th at 431, also used its independent judgment to determine what level of analysis CEQA requires for water supply impacts. The Court did not defer to the lead agency's opinion regarding the law's requirements; rather, it determined for itself what level of analysis was necessary to meet "[t]he law's informational demands." (*Id.* at p. 432.) Further, existing case law also holds that where an agency fails to comply with CEQA's information disclosure requirements, the agency has "failed to proceed in the manner required by law." (*Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 118.)

However, whether an EIR satisfies CEQA's requirements depends in part on whether it was reasonably feasible for an agency to conduct additional or more thorough analysis. EIRs must contain "a detailed statement" of a project's impacts (Pub. Res. Code § 21061), and an agency must "use its best efforts to find out and disclose all that it reasonably can." (CEQA Guidelines § 15144.) Nevertheless, "the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible." (CEQA Guidelines § 15151.)

SCAQMD submits that the question of whether additional analysis or a particular study suggested by a commenter is "feasible" is generally a question of fact. Courts have already held that whether a particular alternative is "feasible" is reviewed by the substantial evidence test.

(*Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 598-99; *Center for Biological Diversity v. County of San Bernardino* (2010) 185 Cal.App.4th 866, 883.) Thus, if a lead agency determines that a particular study or analysis is infeasible, that decision should generally be judged by the substantial evidence standard. However, SCAQMD urges this Court to hold that lead agencies must explain the basis of any determination that a particular analysis is infeasible in the EIR itself. An EIR must discuss information, including issues related to the feasibility of particular analyses "in sufficient detail to enable meaningful participation and criticism by the public. '[W]hatever is required to be considered in an EIR must be in that formal report; what any official might have known from other writings or oral presentations cannot supply what is lacking in the report.'" (*Laurel Heights I, supra*, 47 Cal.3d at p. 405 (quoting *Santiago County Water District v. County of Orange* (1981) 118 Cal.App.3d 818, 831) (discussing analysis of alternatives).) The evidence on which the determination is based should also be summarized in the EIR itself, with appropriate citations to reference materials if necessary. Otherwise commenting agencies such as SCAQMD would be forced to guess where the lead agency's evidence might be located, thus thwarting effective public participation.

Moreover, if a lead agency determines that a particular study or analysis would not result in reliable or useful information and for that reason is not feasible, that determination should be judged by the substantial evidence test. (See *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority*, *supra*, 57 Cal.4th 439, 448, 457:

whether "existing conditions" baseline would be misleading or uninformative judged by substantial evidence standard.[15])

If the lead agency's determination that a particular analysis or study is not feasible is supported by substantial evidence, then the agency has not violated CEQA's information disclosure provisions, since it would be infeasible to provide additional information. This Court's decisions provide precedent for such a result. For example, this Court determined that the issue of whether the EIR should have included a more detailed discussion of future herbicide use was resolved because substantial evidence supported the agency's finding that "the precise parameters of future herbicide use could not be predicted." *Ebbetts Pass Forest Watch v. California Dept. of Forestry & Fire Protection* (2008) 43 Cal.4th 936, 955.

Of course, SCAQMD expects that courts will continue to hold lead agencies to their obligations to consult with, and not to ignore or misrepresent, the views of sister agencies having special expertise in the area of air quality. (*Berkeley Keep Jets Over the Bay v. Board of Port Commissioners* (2007) 91 Cal.App.4th 1344, 1364 n.11.) In some cases, information provided by such expert agencies may establish that the purported evidence relied on by the lead agency is not in fact "substantial". (*Id.* at pp. 1369-1371.)

In sum, courts retain ultimate responsibility to determine what CEQA requires. However, the law does not require exhaustive analysis, but only what is reasonably feasible. Agencies deserve deference for their factual determinations regarding what type of analysis is reasonably feasible. On the other hand, if a commenter requests more information, and the lead agency declines to provide it but does *not* determine that the

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[15] The substantial evidence standard recognizes that the courts "have neither the resources nor the scientific expertise" to weigh conflicting evidence on technical issues. (*Laurel Heights I, supra,* 47 Cal.3d 376, 393.)

requested study or analysis would be infeasible, misleading or uninformative, the question becomes whether the omission of that analysis renders the EIR inadequate to satisfy CEQA's informational purposes. (*Id.* at pp. 1370-71.) Again, this is predominantly a question of law and should be judged by the de novo or independent judgment standard of review. Of course, this Court has recognized that a "project opponent or reviewing court can always imagine some additional study or analysis that might provide helpful information. It is not for them to design the EIR. That further study...might be helpful does not make it necessary." (*Laurel Heights I, supra,* 47 Cal.3d 376, 415 – see also CEQA Guidelines § 15204(a) [CEQA "does not require a lead agency to conduct every test. . . recommended or demanded by commenters."].) Courts, then, must adjudicate whether an omission of particular information renders an EIR inadequate to serve CEQA's informational purposes.[16]

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[16] We recognize that there is case law stating that the substantial evidence standard applies to "challenges to the scope of an EIR's analysis of a topic" as well as the methodology used and the accuracy of the data relied on in the document "because these types of challenges involve factual questions." (*Bakersfield Citizens for Local Control v. City of Bakersfield, supra,* 124 Cal.App.4th 1184, 1198, and cases relied on therein.) However, we interpret this language to refer to situations where the question of the scope of the analysis really is factual—that is, where it involves whether further analysis is feasible, as discussed above. This interpretation is supported by the fact that the *Bakersfield* court expressly rejected an argument that a claimed "omission of information from the EIR should be treated as inquiries whether there is substantial evidence supporting the decision approving the project. " *Bakersfield, supra,* 124 Cal.App.4th at p. 1208. And the *Bakersfield* court ultimately decided that the lead agency must analyze the connection between the identified air pollution impacts and resulting health impacts, even though the EIR already included some discussion of air-pollution-related respiratory illnesses. *Bakersfield, supra,* 124 Cal.App.4th at p. 1220. Therefore, the court must not have interpreted this question as one of the "scope of the analysis" to be judged by the substantial evidence standard.

B. Friant Ranch's Rationale for Rejecting the Independent Judgment Standard of Review is Unsupported by Case Law.

In its brief, Friant Ranch makes a distinction between cases where a required CEQA topic is not discussed at all (to be reviewed by independent judgment as a failure to proceed in the manner required by law) and cases where a topic is discussed, but the commenter claims the information provided is insufficient (to be judged by the substantial evidence test). (Opening Brief, pp. 13-17.) The Court of Appeal recognized these two types of cases, but concluded that both raised questions of law. (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4th 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) We believe the distinction drawn by Friant Ranch is unduly narrow, and inconsistent with cases which have concluded that CEQA documents are insufficient. In many instances, CEQA's requirements are stated broadly, and the courts must interpret the law to determine what level of analysis satisfies CEQA's mandate for providing meaningful information, even though the EIR discusses the issue to some extent.

For example, the CEQA Guidelines require discussion of the existing environmental baseline. In *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 954-955, the lead agency had discussed the environmental baseline by describing historic month-end water levels in the affected lakes. However, the court held that this was not an adequate baseline discussion because it failed to discuss the timing and amounts of past actual water releases, to allow comparison with the proposed project. The court evidently applied the independent judgment test to its decision, even though the agency discussed the issue to some extent.

Likewise, in *Vineyard Area Citizens* (2007) 40 Cal.4th 412, this Court addressed the question of whether an EIR's analysis of water supply impacts complied with CEQA. The parties agreed that the EIR was required to analyze the effects of providing water to the development project, "and that in order to do so the EIR had, in some manner, to identify the planned sources of that water." (*Vineyard Area Citizens, supra,* at p. 428.) However, the parties disagreed as to the level of detail required for this analysis and "what level of uncertainty regarding the availability of water supplies can be tolerated in an EIR . . . ." (*Id.*) In other words, the EIR had analyzed water supply impacts for the project, but the petitioner claimed that the analysis was insufficient.

This Court noted that neither CEQA's statutory language or the CEQA Guidelines specifically addressed the question of how precisely an EIR must discuss water supply impacts. (*Id.*) However, it explained that CEQA "states that '[w]hile foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.'" (*Id.*, [Guidelines § 15144].) The Court used this general principle, along with prior precedent, to elucidate four "principles for analytical adequacy" that are necessary in order to satisfy "CEQA's informational purposes." (*Vineyard Area Citizens, supra,* at p. 430.) The Court did not defer to the agency's determination that the EIR's analysis of water supply impacts was sufficient. Rather, this Court used its independent judgment to determine for itself the level of analysis required to satisfy CEQA's fundamental purposes. (*Vineyard Area Citizens, supra*, at p. 441: an EIR does not serve its purposes where it neglects to explain likely sources of water and "... leaves long term water supply considerations to later stages of the project.")

Similarly, the CEQA Guidelines require an analysis of noise impacts of the project. (Appendix G, "Environmental Checklist Form."[17]) In *Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1123, the court held that the lead agency's noise impact analysis was inadequate even though it had addressed the issue and concluded that the increase would not be noticeable. If the court had been using the substantial evidence standard, it likely would have upheld this discussion.

Therefore, we do not agree that the issue can be resolved on the basis suggested by Friant Ranch, which would apply the substantial evidence standard to *every* challenge to an analysis that addresses a required CEQA topic. This interpretation would subvert the courts' proper role in interpreting CEQA and determining what the law requires.

Nor do we agree that the Court of Appeal in this case violated CEQA's prohibition on courts interpreting its provisions "in a manner which imposes procedural or substantive requirements beyond those explicitly stated in this division or in the state guidelines." (Pub. Resources Code § 21083.1.) CEQA requires an EIR to describe *all* significant impacts of the project on the environment. (Pub. Resources Code § 21100(b)(2); *Vineyard Area Citizens, supra,* at p. 428.) Human beings are part of the environment, so CEQA requires EIRs to discuss a project's significant impacts on human health. However, except in certain particular circumstances,[18] neither the CEQA statute nor Guidelines specify the precise level of analysis that agencies must undertake to satisfy the law's requirements. (see, e.g., CEQA Guidelines § 15126.2(a) [EIRs must describe "health and safety problems caused by {a project's} physical changes"].) Accordingly, courts must interpret CEQA as a whole to

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[17] Association of Environmental Professionals, 2015 CEQA Statute and Guidelines (2015) p.287.

[18] E.g., Pub. Resources Code § 21151.8(C)(3)(B)(iii) (requiring specific type of health risk analysis for siting schools).

determine whether a particular EIR is sufficient as an informational document. A court determining whether an EIR's discussion of human health impacts is legally sufficient does not constitute imposing a new substantive requirement.[19] Under Friant Ranch's theory, the above-referenced cases holding a CEQA analysis inadequate would have violated the law. This is not a reasonable interpretation.

IV. COURTS MUST SCRUPULOUSLY ENFORCE THE REQUIREMENTS THAT LEAD AGENCIES CONSULT WITH AND OBTAIN COMMENTS FROM AIR DISTRICTS

Courts must "scrupulously enforce" CEQA's legislatively mandated requirements. (*Vineyard Area Citizens, supra*, 40 Cal.4th 412, 435.) Case law has firmly established that lead agencies must consult with the relevant air pollution control district before conducting an initial study, and must provide the districts with notice of the intention to adopt a negative declaration (or EIR). (*Schenck v. County of Sonoma* (2011) 198 Cal.App.4th 949, 958.) As *Schenck* held, neither publishing the notice nor providing it to the State Clearinghouse was a sufficient substitute for sending notice directly to the air district. (*Id.*) Rather, courts "must be satisfied that [administrative] agencies have fully complied with the procedural requirements of CEQA, since only in this way can the important public purposes of CEQA be protected from subversion." *Schenck,* 198 Cal.App.4th at p. 959 (citations omitted).[20]

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[19] We submit that Public Resources Code Section 21083.1 was intended to prevent courts from, for example, holding that an agency must analyze economic impacts of a project where there are no resulting environmental impacts (see CEQA Guidelines § 15131) , or imposing new procedural requirements, such as imposing additional public notice requirements not set forth in CEQA or the Guidelines.

[20] Lead agencies must consult air districts, as public agencies with jurisdiction by law over resources affected by the project, *before* releasing an EIR. (Pub. Resources Code §§ 21104(a); 21153.) Moreover, air

Lead agencies should be aware, therefore, that failure to properly seek and consider input from the relevant air district constitutes legal error which may jeopardize their project approvals. For example, the court in *Fall River Wild Trout Foundation v. County of Shasta,* (1999) 70 Cal.App.4th 482, 492 held that the failure to give notice to a trustee agency (Department of Fish and Game) was prejudicial error requiring reversal. The court explained that the lack of notice prevented the Department from providing any response to the CEQA document. (*Id.* at p. 492.) It therefore prevented relevant information from being presented to the lead agency, which was prejudicial error because it precluded informed decision-making. (*Id.*)[21]

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districts should be considered "state agencies" for purposes of the requirement to consult with "trustee agencies" as set forth in Public Resources Code § 20180.3(a). This Court has long ago held that the districts are not mere "local agencies" whose regulations are superseded by those of a state agency regarding matters of statewide concern, but rather have concurrent jurisdiction over such issues. (*Orange County Air Pollution Control District v. Public Util. Com.* (1971) 4 Cal.3d 945, 951, 954.) Since air pollution is a matter of statewide concern, *Id* at 952, air districts should be entitled to trustee agency status in order to ensure that this vital concern is adequately protected during the CEQA process.

[21] In *Schenck,* the court concluded that failure to give notice to the air district was not prejudicial, but this was partly because the trial court had already corrected the error before the case arrived at the Court of Appeal. The trial court issued a writ of mandate requiring the lead agency to give notice to the air district. The air district responded by concurring with the lead agency that air impacts were not significant. (*Schenck,* 198 Cal.App.4th 949, 960.) We disagree with the *Schenck* court that the failure to give notice to the air district would not have been prejudicial (even in the absence of the trial court writ) merely because the lead agency purported to follow the air district's published CEQA guidelines for significance. (*Id.*, 198 Cal.App.4th at p. 960.) In the first place, absent notice to the air district, it is uncertain whether the lead agency properly followed those guidelines. Moreover, it is not realistic to expect that an air district's published guidelines would necessarily fully address all possible air-quality related issues that can arise with a CEQA project, or that those

Similarly, lead agencies must obtain additional information requested by expert agencies, including those with jurisdiction by law, if that information is necessary to determine a project's impacts. (*Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236-37.) Approving a project without obtaining that information constitutes a failure to proceed in the manner prescribed by CEQA. (*Id.* at p. 1236.)

Moreover, a lead agency can save significant time and money by consulting with the air district early in the process. For example, the lead agency can learn what the air district recommends as an appropriate analysis on the facts of its case, including what kinds of health impacts analysis may be available, and what models are appropriate for use. This saves the lead agency from the need to do its analysis all over again and possibly needing to recirculate the document after errors are corrected, if new significant impacts are identified. (CEQA Guidelines § 15088.5(a).) At the same time, the air district's expert input can help the lead agency properly determine whether another commenter's request for additional analysis or studies is reasonable or feasible. Finally, the air district can provide input on what mitigation measures would be feasible and effective.

Therefore, we suggest that this Court provide guidance to lead agencies reminding them of the importance of consulting with the relevant air districts regarding these issues. Otherwise, their feasibility decisions may be vulnerable to air district evidence that establishes that there is no substantial evidence to support the lead agency decision not to provide specific analysis. (*See Berkeley Keep Jets Over the Bay, supra,* 91 Cal.App.4th 1344, 1369-1371.)

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guidelines would necessarily be continually modified to reflect new developments. Therefore we believe that, had the trial court not already ordered the lead agency to obtain the air district's views, the failure to give notice would have been prejudicial, as in *Fall River, supra,* 70 Cal.App.4th 482, 492.

CONCLUSION

The SCAQMD respectfully requests this Court *not* to establish a hard-and-fast rule concerning whether CEQA requires a lead agency to correlate identified air quality impacts of a project with resulting health outcomes. Moreover, the question of whether an EIR is "sufficient as an informational document" is a mixed question of fact and law containing two levels of inquiry. Whether a particular proposed analysis is feasible is predominantly a question of fact to be judged by the substantial evidence standard of review. Where the requested analysis is feasible, but the lead agency relies on legal or policy reasons not to provide it, the question of whether the EIR is nevertheless sufficient as an informational document is predominantly a question of law to be judged by the independent judgment standard of review.

Respectfully submitted,

DATED: April 3, 2015

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CERTIFICATE OF WORD COUNT

Pursuant to Rule 8.520(c)(1) of the California Rules of Court, I hereby certify that this brief contains 8,476 words, including footnotes, but excluding the Application, Table of Contents, Table of Authorities, Certificate of Service, this Certificate of Word Count, and signature blocks. I have relied on the word count of the Microsoft Word Vista program used to prepare this Certificate.

DATED: April 3, 2015 Respectfully submitted,

Barbara Baird

Barbara Baird

PROOF OF SERVICE

I am employed in the County of Los Angeles, California. I am over the age of 18 years and not a party to the within action. My business address is 21865 Copley Drive, Diamond Bar, California 91765.

On April 3, 2015 I served true copies of the following document(s) described as **APPLICATION OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FOR LEAVE TO FILE BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY AND *[PROPOSED]* BRIEF OF *AMICUS CURIAE*** by placing a true copy of the foregoing document(s) in a sealed envelope addressed as set forth on the attached service list as follows:

BY MAIL: I enclosed the document(s) in a sealed envelope or package addressed to the persons at the addresses listed in the Service List and placed the envelope for collection and mailing following our ordinary business practices. I am readily familiar with this District's practice for collection and processing of correspondence for mailing. Under that practice, the correspondence would be deposited with the United States Postal Service, with postage thereon fully prepaid at Diamond Bar, California, in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if postal cancellation date or postage meter date is more than one day after date of deposit for mailing in affidavit.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on April 3, 2015 at Diamond Bar, California.

Patricia Anderson

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Durst Drive Warehouse

MOBILE SOURCE HEALTH RISK ASSESSMENT

CITY OF RIALTO

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JANUARY 26, 2022

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LIST OF ABBREVIATED TERMS

(1)	Reference
µg	Microgram
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
APS	Auxiliary Power System
AQMD	Air Quality Management District
ARB	Air Resources Board
CEQA	California Environmental Quality Act
CPF	Cancer Potency Factor
DPM	Diesel Particulate Matter
EMFAC	Emission Factor Model
EPA	Environmental Protection Agency
HHD	Heavy Heavy-Duty
HI	Hazard Index
HRA	Health Risk Assessment
LHD	Light Heavy-Duty
MATES	Multiple Air Toxics Exposure Study
MEIR	Maximally Exposed Individual Receptor
MEISC	Maximally Exposed Individual School Child
MEIW	Maximally Exposed Individual Worker
MHD	Medium Heavy-Duty
NAD	North American Datum
OEHHA	Office of Environmental Health Hazard Assessment
PM10	Particulate Matter 10 microns in diameter or less
Project	Durst Drive Warehouse
REL	Reference Exposure Level
RM	Recommended Measures
SCAQMD	South Coast Air Quality Management District
SRA	Source Receptor Area
TAC	Toxic Air Contaminant
TA	Traffic Analysis
URF	Unit Risk Factor
UTM	Universal Transverse Mercator
VMT	Vehicle Miles Traveled

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EXECUTIVE SUMMARY

This report evaluates the potential health risk impacts to sensitive receptors (which are residents) and adjacent workers associated with the development of the proposed Project, more specifically, health risk impacts as a result of exposure to Toxic Air Contaminants (TACs) including diesel particulate matter (DPM) as a result of heavy-duty diesel trucks accessing the site. This section summarizes the significance criteria and Project health risks.

The results of the health risk assessment from Project-generated DPM emissions are provided in Table ES-1, ES-2, and ES-3 below for the Project.

CONSTRUCTION IMPACTS

The land use with the greatest potential exposure to Project construction DPM source emissions is Location R3 which is located approximately 803 feet south of the Project site at an existing residence located at 504 South Quince Avenue. R3 is placed at the private outdoor living area (backyard) facing the Project site. At the MEIR, the maximum incremental cancer risk attributable to Project construction DPM source emissions is estimated at 0.51 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction activity. All other receptors during construction activity would experience less risk than what is identified for this location. The nearest modeled receptors are illustrated on Exhibit 2-D.

OPERATIONAL IMPACTS

Residential Exposure Scenario:

The residential land use with the greatest potential exposure to Project DPM source emissions is Location R3 which is located approximately 803 feet south of the Project site at an existing residence located at 504 South Quince Avenue. R3 is placed at the private outdoor living area (backyard) facing the Project site. At the MEIR, the maximum incremental cancer risk attributable to Project DPM source emissions is estimated at 0.05 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Because all other modeled residential receptors are exposed to lesser concentrations and are located at a greater distance from the Project site and primary truck route than the MEIR analyzed herein, and TACs generally dissipates with distance from the source, all other residential receptors in the vicinity of the Project site would be exposed to less emissions and therefore less risk than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to nearby residences. The nearest modeled receptors are illustrated on Exhibit 2-D.

Worker Exposure Scenario[1]*:*

The worker receptor land use with the greatest potential exposure to Project DPM source emissions is Location R7, which represents the adjacent potential worker receptor approximately 108 feet east of the Project site. At the MEIW, the maximum incremental cancer risk impact is 0.04 in one million which is less than the SCAQMD's threshold of 10 in one million. Maximum non-cancer risks at this same location were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Because all other modeled worker receptors are located at a greater distance than the MEIW analyzed herein, and DPM dissipates with distance from the source, all other worker receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIW identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent workers. The nearest modeled receptors are illustrated on Exhibit 2-D.

School Child Exposure Scenario:

Proximity to sources of toxics is critical to determining the impact. In traffic-related studies, the additional non-cancer health risk attributable to proximity was seen within 1,000 feet and was strongest within 300 feet. California freeway studies show about a 70-percent drop-off in particulate pollution levels at 500 feet. Based on California Air Resources Board (CARB) and SCAQMD emissions and modeling analyses, an 80-percent drop-off in pollutant concentrations is expected at approximately 1,000 feet from a distribution center (1).

The 1,000-foot evaluation distance is supported by research-based findings concerning Toxic Air Contaminant (TAC) emission dispersion rates from roadways and large sources showing that emissions diminish substantially between 500 and 1,000 feet from emission sources.

A one-quarter mile radius, or 1,320 feet, is commonly utilized for identifying sensitive receptors, such as schools, that may be impacted by a proposed project. This radius is more robust than, and therefore provides a more health protective scenario for evaluation than the 1,000-foot impact radius identified above.

There are no schools located within a ¼ mile of the Project site. The nearest schools are Rialto Middle School, located approximately 1,447 feet north of the Project site, and Charlotte N. Werner Elementary School, located approximately 1,565 feet northeast of the Project site. Although there is no reasonable potential that TAC emissions would cause significant health impacts at distances of more than ¼ mile from the air pollution source, the potential health risk impacts to these schools were evaluated as part of this analysis. At the maximally exposed individual school child (MEISC), the maximum incremental cancer risk impact attributable to the Project is calculated to be <0.01 in one million, which is less than the significance threshold of 10 in one million. At this same location, non-cancer risks attributable to the Project were calculated

1 SCAQMD guidance does not require assessment of the potential health risk to on-site workers. Excerpts from the document OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines—The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2003), also indicate that it is not necessary to examine the health effects to on-site workers unless required by RCRA (Resource Conservation and Recovery Act) / CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) or the worker resides on-site.

to be <0.01, which would not exceed the applicable significance threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to nearby school children.

CONSTRUCTION AND OPERATIONAL IMPACTS

The land use with the greatest potential exposure to Project construction and operational DPM source emissions is Location R3. At the MEIR, the maximum incremental cancer risk attributable to Project construction and operational DPM source emissions is estimated at 0.51 in one million, which is less than the threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction and operational activity. All other receptors during construction and operational activity would experience less risk than what is identified for this location. The nearest modeled receptors are illustrated on Exhibit 2-D.

TABLE ES-1: SUMMARY OF CONSTRUCTION CANCER AND NON-CANCER RISKS

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
2 Year Exposure	Maximum Exposed Sensitive Receptor	0.51	10	NO
Time Period	**Location**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Annual Average	Maximum Exposed Sensitive Receptor	≤0.01	1.0	NO

TABLE ES-2: SUMMARY OF OPERATIONAL CANCER AND NON-CANCER RISKS

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
30 Year Exposure	Maximum Exposed Sensitive Receptor	0.05	10	NO
25 Year Exposure	Maximum Exposed Worker Receptor	0.04	10	NO
9 Year Exposure	Maximum Exposed School Child Receptor	<0.01	10	NO
Time Period	**Location**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Annual Average	Maximum Exposed Sensitive Receptor	≤0.01	1.0	NO
Annual Average	Maximum Exposed Worker Receptor	≤0.01	1.0	NO

TABLE ES-3: SUMMARY OF CONSTRUCTION AND OPERATIONAL CANCER AND NON-CANCER RISKS

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
30 Year Exposure	Maximum Exposed Sensitive Receptor	0.51	10	NO
Time Period	**Location**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Annual Average	Maximum Exposed Sensitive Receptor	≤0.01	1.0	NO

1 INTRODUCTION

The South Coast Air Quality Management District (SCAQMD) typically issues a comment letter on the Notice of Preparation of a CEQA Document. Per the SCAQMD's typical comment letter, if a proposed Project is expected to generate/attract diesel trucks, which emit diesel particulate matter (DPM) or other Toxic Air Contaminants (TACs), preparation of a HRA is necessary. This document serves to meet the SCAQMD's request for preparation of a HRA. This HRA has been prepared in accordance with the document Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (2) and is comprised of all relevant and appropriate procedures presented by the United States Environmental Protection Agency (U.S. EPA), California EPA and SCAQMD. Cancer risk is expressed in terms of expected incremental incidence per million population. The SCAQMD has established an incidence rate of ten (10) persons per million as the maximum acceptable incremental cancer risk due to TAC exposure from a project such as the proposed Project. This threshold serves to determine whether or not a given project has a potentially significant development-specific and cumulatively considerable impact.

The AQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (3). In this report the AQMD states (Page D-3):

"…the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."

The SCAQMD has also established non-carcinogenic risk parameters for use in HRAs. Non-carcinogenic risks are quantified by calculating a "hazard index," expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). An REL is a concentration at or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. In this HRA, non-carcinogenic exposures of less than 1.0 are considered less-than-significant. Both the cancer risk and non-carcinogenic risk thresholds are applied to the nearest sensitive receptors below.

1.1 SITE LOCATION

The proposed Durst Drive Warehouse site is located at 1230 West Durst Drive in the City of Rialto, as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The Project is proposed to consist of a single 201,239 square foot (sf) warehouse building which includes APNs 1280-622-5, -6, and -7. However, this analysis was performed on an earlier version of the site plan that included a larger building floor area than what is currently proposed, and therefore, the analysis overstates the Project's impacts[2]. It is anticipated that the Project would be developed in a single phase with an anticipated Opening Year of 2023. Consistent with the *Durst Drive Warehouse Air Quality Impact Analysis*, the proposed Project is expected to generate a total of approximately 46 two-way truck trips per day (23 inbound and 23 outbound) (4). This study relies on the actual Project trips (as opposed to the passenger car equivalents) to account for the effect of individual truck trips on the study area roadway network.

[2] For purposes of this analysis, a building floor area of 203,350 square feet was evaluated.

EXHIBIT 1-A: LOCATION MAP

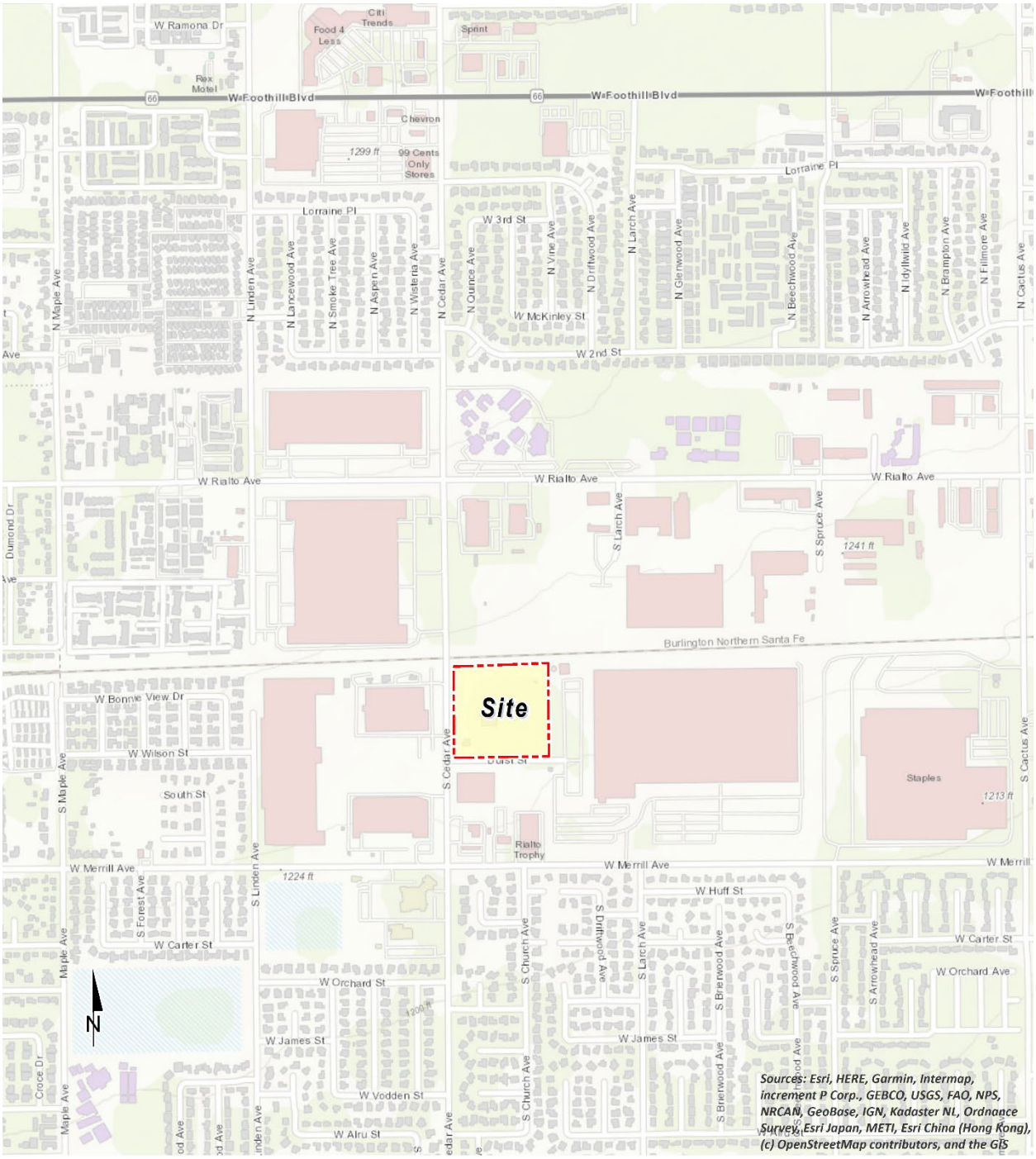
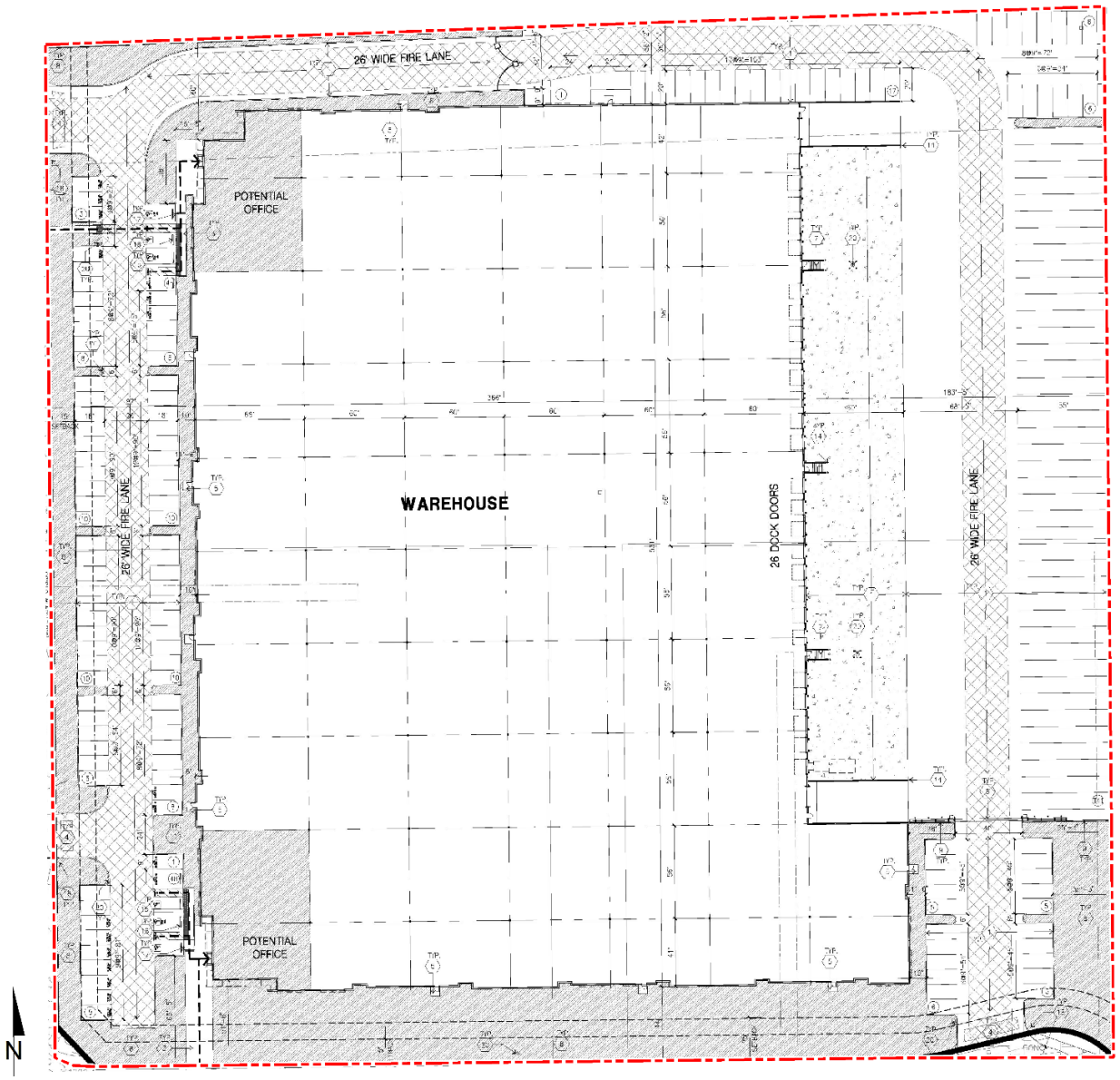


EXHIBIT 1-B: SITE PLAN



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2 BACKGROUND

2.1 BACKGROUND ON RECOMMENDED METHODOLOGY

This HRA is based on SCAQMD guidelines to produce conservative estimates of human health risk posed by exposure to DPM. The conservative nature of this analysis is due primarily to the following factors:

- The ARB-adopted diesel exhaust Unit Risk Factor (URF) of 300 in one million per µg/m3 is based upon the upper 95 percentile of estimated risk for each of the epidemiological studies utilized to develop the URF. Using the 95th percentile URF represents a very conservative (health-protective) risk posed by DPM because it represents breathing rates that are high for the human body (95% higher than the average population).
- The emissions derived assume that every truck accessing the Project site will idle for 15 minutes under the unmitigated scenario, and this is an overestimation of actual idling times and thus conservative.[2] The California Air Resources Board (CARB's) anti-idling requirements impose a 5-minute maximum idling time and therefore the analysis conservatively overestimates DPM emissions from idling by a factor of 3.

2.2 CONSTRUCTION HEALTH RISK ASSESSMENT

2.2.1 EMISSIONS CALCULATIONS

The emissions calculations for the construction HRA component are based on an assumed mix of construction equipment and hauling activity as presented in the *Durst Drive Warehouse Air Quality Impact Analysis* ("technical study") prepared by Urban Crossroads, Inc. (4)

Construction related DPM emissions are expected to occur primarily as a function of heavy-duty construction equipment that would be operating on-site.

As discussed in the technical study, the Project would result in approximately 250 total working-days for construction activity. The construction duration by phase is shown on Table 2-1. A detailed summary of construction equipment assumptions by phase is provided at Table 2-2. The CalEEMod emissions outputs are presented in Appendix 2.1. The modeled emission sources for construction activity are illustrated on Exhibit 2-A.

[2] Although the Project is required to comply with ARB's idling limit of 5 minutes, staff at SCAQMD recommends that the on-site idling emissions should be estimated for 15 minutes of truck idling (personal communication, in person, with Jillian Wong, December 22, 2016), which would take into account on-site idling which occurs while the trucks are waiting to pull up to the truck bays, idling at the bays, idling at check-in and check-out, etc.

TABLE 2-1: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Demolition	07/01/2022	07/28/2022	20
Site Preparation	07/29/2022	08/11/2022	10
Grading	08/12/2022	09/08/2022	20
Building Construction	09/09/2022	06/15/2023	200
Paving	05/19/2023	06/15/2023	20
Architectural Coating	05/19/2023	06/15/2023	20

TABLE 2-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment	Amount	Hours Per Day
Demolition	Excavators	2	8
	Skid Steer Loaders	1	8
Site Preparation	Crawler Tractors	4	8
	Rubber Tired Dozers	3	8
Grading	Crawler Tractors	3	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
Building Construction	Cranes	1	8
	Crawler Tractors	3	8
	Forklifts	3	8
	Generator Sets	1	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

EXHIBIT 2-A: MODELED CONSTRUCTION EMISSION SOURCES



2.3 OPERATIONAL HEALTH RISK ASSESSMENT

2.3.1 ON-SITE AND OFF-SITE TRUCK ACTIVITY

Vehicle DPM emissions were calculated using emission factors for particulate matter less than 10µm in diameter (PM_{10}) generated with the 2017 version of the EMission FACtor model (EMFAC) developed by the CARB. EMFAC 2017 is a mathematical model that CARB developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the ARB to project changes in future emissions from on-road mobile sources (5). The most recent version of this model, EMFAC 2017, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled (VMT) by speed, and number of starts per day.

Several distinct emission processes are included in EMFAC 2017. Emission factors calculated using EMFAC 2017 are expressed in units of grams per vehicle miles traveled (g/VMT) or grams per idle-hour (g/idle-hr), depending on the emission process. The emission processes and corresponding emission factor units associated with diesel particulate exhaust for this Project are presented below.

For this Project, annual average PM_{10} emission factors were generated by running EMFAC 2017 in EMFAC Mode for vehicles in the San Bernardino County jurisdiction. The EMFAC Mode generates emission factors in terms of grams of pollutant emitted per vehicle activity and can calculate a matrix of emission factors at specific values of temperature, relative humidity, and vehicle speed. The model was run for speeds traveled in the vicinity of the Project. The vehicle travel speeds for each segment modeled are summarized below.

- Idling – on-site loading/unloading and truck gate
- 5 miles per hour – on-site vehicle movement including driving and maneuvering
- 25 miles per hour – off-site vehicle movement including driving and maneuvering.

Calculated emission factors are shown at Table 2-3. As a conservative measure, a 2023 EMFAC 2017 run was conducted and a static 2023 emissions factor data set was used for the entire duration of analysis herein (e.g., 30 years). Use of 2023 emission factors would overstate potential impacts since this approach assumes that emission factors remain "static" and do not change over time due to fleet turnover or cleaner technology with lower emissions that would be incorporated into vehicles after 2023. Additionally, based on EMFAC 2017, Light-Heavy-Duty Trucks are comprised of 45.9% diesel, Medium-Heavy-Duty Trucks are comprised of 90.9% diesel, and Heavy-Heavy-Duty Trucks are comprised of 92.7% diesel. Trucks fueled by diesel are accounted for by these percentages accordingly in the emissions factor generation. Appendix 2.2 includes additional details on the emissions estimates from EMFAC.

The vehicle DPM exhaust emissions were calculated for running exhaust emissions. The running exhaust emissions were calculated by applying the running exhaust PM_{10} emission factor (g/VMT) from EMFAC over the total distance traveled. The following equation was used to estimate off-site emissions for each of the different vehicle classes comprising the mobile sources (6):

$Emissions_{speedA}$ (g/s) = $EF_{RunExhaust}$ (g/VMT) * Distance (VMT/trip) * Number of Trips (trips/day) / seconds per day

Where:

$Emissions_{speedA}$ (g/s): Vehicle emissions at a given speed A;

$EF_{RunExhaust}$ (g/VMT): EMFAC running exhaust PM_{10} emission factor at speed A;

Distance (VMT/trip): Total distance traveled per trip.

Similar to off-site traffic, on-site vehicle running emissions were calculated by applying the running exhaust PM_{10} emission factor (g/VMT) from EMFAC and the total vehicle trip number over the length of the driving path using the same formula presented above for on-site emissions. In addition, on-site vehicle idling exhaust emissions were calculated by applying the idle exhaust PM_{10} emission factor (g/idle-hr) from EMFAC and the total truck trip over the total assumed idle time (15 minutes). The following equation was used to estimate the on-site vehicle idling emissions for each of the different vehicle classes (6):

$Emissions_{idle}$ (g/s) = EF_{idle} (g/hr) * Number of Trips (trips/day) * Idling Time (min/trip) *

60 minutes per hour / seconds per day

Where:

$Emissions_{idle}$ (g/s): Vehicle emissions during idling;

EF_{idle}(g/s): EMFAC idle exhaust PM_{10} emission factor.

TABLE 2-3: 2023 WEIGHTED AVERAGE DPM EMISSIONS FACTORS

Speed	Weighted Average
0 (idling)	0.07755 (g/idle-hr)
5	0.01412 (g/s)
25	0.00660 (g/s)

Each roadway was modeled as a line source (made up of multiple adjacent volume sources). Due to the large number of volume sources modeled for this analysis, the corresponding coordinates of each volume source have not been included in this report but are included in Appendix 2.3. The DPM emission rate for each volume source was calculated by multiplying the emission factor (based on the average travel speed along the roadway) by the number of trips and the distance traveled along each roadway segment and dividing the result by the number of volume sources along that roadway, as illustrated on Table 2-4. The modeled emission sources are illustrated on Exhibit 2-B for on-site sources and Exhibit 2-C for off-site sources. The modeling domain is limited to the Project's primary truck route and includes off-site sources in the study area for more than ¾ mile. This modeling domain is more inclusive and conservative than using only a ¼ mile modeling domain which is the distance supported by several reputable studies which conclude that the greatest potential risks occur within a ¼ mile of the primary source of emissions (1) (in the case of the Project, the primary source of emissions is the on-site idling and on-site travel).

EXHIBIT 2-B: MODELED ON-SITE EMISSION SOURCES

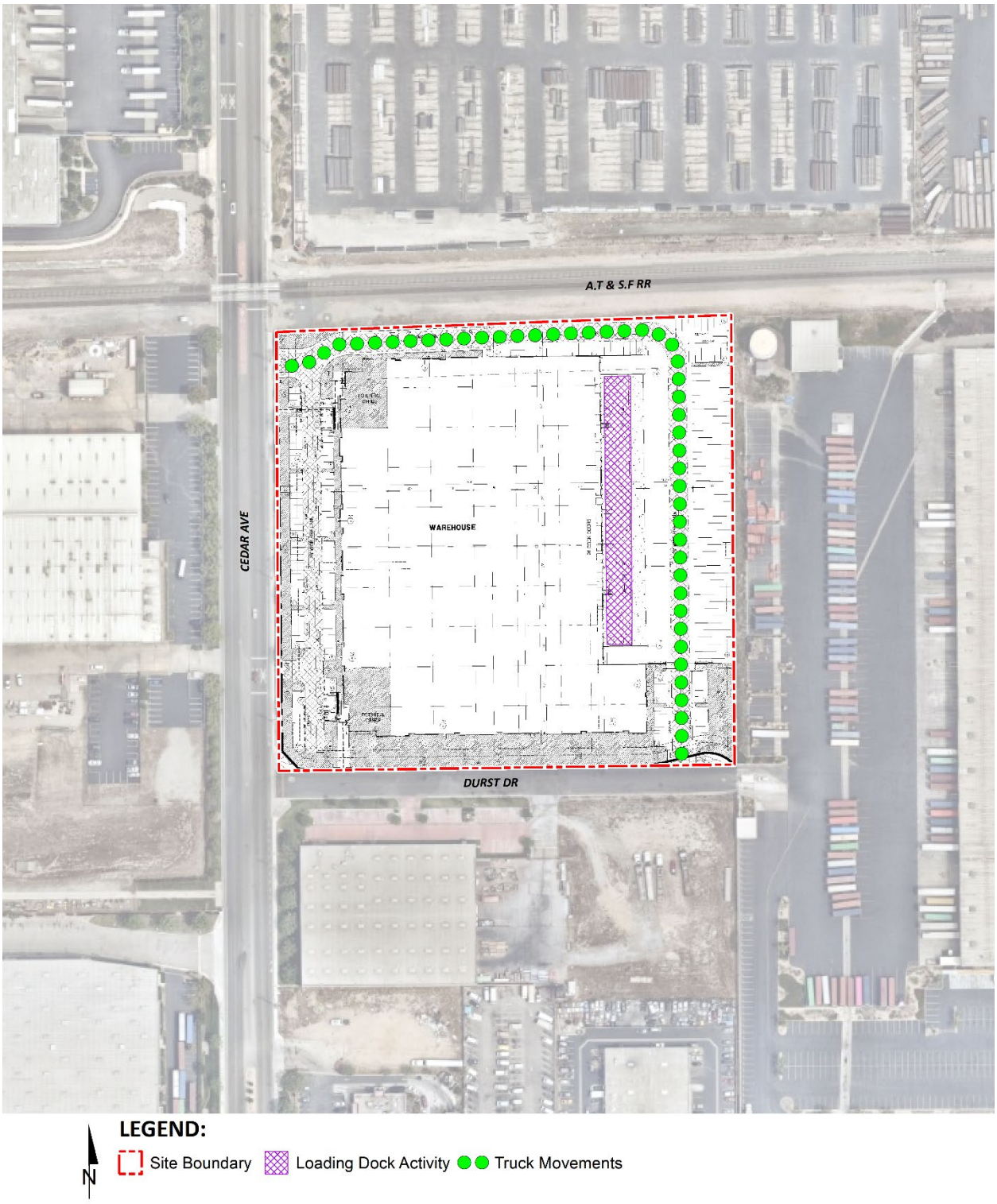

EXHIBIT 2-C: MODELED OFF-SITE EMISSION SOURCES



TABLE 2-4: DPM EMISSIONS FROM PROJECT TRUCKS (2023 ANALYSIS YEAR)

Truck Emission Rates						
Source	Trucks Per Day	VMT [a] (miles/day)	Truck Emission Rate [b] (grams/mile)	Truck Emission Rate [b] (grams/idle-hour)	Daily Truck Emissions [c] (grams/day)	Modeled Emission Rates (g/second)
On-Site Idling	23			0.0776	0.45	5.161E-06
On-Site Travel	46	10.96	0.0141		0.15	1.792E-06
Off-Site Travel Cedar Avenue 25% Inbound/Outbound	12	3.04	0.0066		0.02	2.319E-07
Off-Site Travel Cedar Avenue 45% Inbound/Outbound	21	2.04	0.0066		0.01	1.558E-07
Off-Site Travel Cedar Avenue 75% Inbound/Outbound	9	15.47	0.0066		0.10	1.181E-06
Off-Site Travel Durst Drive 80% Inbound/Outbound	37	4.06	0.0066		0.03	3.099E-07

[a] Vehicle miles traveled are for modeled truck route only.

[b] Emission rates determined using EMFAC 2017. Idle emission rates are expressed in grams per idle hour rather than grams per mile.

[c] This column includes the total truck travel and truck idle emissions. For idle emissions this column includes emissions based on the assumption that each truck idles for 15 minutes.

On-site truck idling was estimated to occur as trucks enter and travel through the Project site. Although the Project's diesel-fueled truck and equipment operators will be required by State law to comply with CARB's idling limit of 5 minutes, staff at SCAQMD recommends that the on-site idling emissions be calculated assuming 15 minutes of truck idling (7), which would take into account on-site idling which occurs while the trucks are waiting to pull up to the truck bays, idling at the bays, idling at check-in and check-out, etc. As such, this analysis calculates truck idling at 15 minutes, consistent with SCAQMD's recommendation.

As summarized in the *Durst Drive Warehouse Air Quality Impact Analysis* prepared by Urban Crossroads, Inc., the Project is expected to generate a total of approximately 285 vehicular trips-ends per day (actual vehicles) which includes 46 two-way truck trips per day (4).

2.3 EXPOSURE QUANTIFICATION

The analysis herein has been conducted in accordance with the guidelines in the Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (2). SCAQMD recommends using the Environmental Protection Agency's (U.S. EPA's) AERMOD model. For purposes of this analysis, the Lakes AERMOD View (Version 10.2.1) was used to calculate annual average particulate concentrations associated with site operations. Lakes AERMOD View was utilized to incorporate the U.S. EPA's latest AERMOD Version 21112 (8).

The model offers additional flexibility by allowing the user to assign an initial release height and vertical dispersion parameters for mobile sources representative of a roadway. For this HRA, the roadways were modeled as adjacent volume sources. Roadways were modeled using the U.S. EPA's haul route methodology for modeling of on-site and off-site truck movement. More specifically, the Haul Road Volume Source Calculator in Lakes AERMOD View has been utilized to determine the release height parameters. Based on the US EPA methodology, the Project's modeled sources would result in a release height of 3.49 meters, and an initial lateral dimension of 4.0 meters, and an initial vertical dimension of 3.25 meters.

SCAQMD-recommended model parameters are presented in Table 2-5 (9). The model requires additional input parameters including emission data and local meteorology. Meteorological data from the SCAQMD's Fontana monitoring station (SRA 34) was used to represent local weather conditions and prevailing winds (10).

TABLE 2-5: AERMOD MODEL PARAMETERS

Dispersion Coefficient (Urban/Rural)	Urban (Population 2,035,210)
Terrain (Flat/Elevated)	Elevated (Regulatory Default)
Averaging Time	1 year (5-year Meteorological Data Set)
Receptor Height	0 meters (Regulatory Default)

Universal Transverse Mercator (UTM) coordinates for World Geodetic System (WGS) 84 were used to locate the Project site boundaries, each volume source location, and receptor locations in the Project site's vicinity. The AERMOD dispersion model summary output files for the

proposed Project are presented in Appendix 2.3. Modeled sensitive receptors were placed at residential and non-residential locations.

Receptors may be placed at applicable structure locations for residential and worker property and not necessarily the boundaries of the properties containing these uses because the human receptors (residents and workers) spend a majority of their time at the residence or in the workplace's building, and not on the property line. It should be noted that the primary purpose of receptor placement is focused on long-term exposure. For example, the HRA evaluates the potential health risks to residents and workers over a period of 30 or 25 years of exposure, respectively. Notwithstanding, as a conservative measure, receptors were placed at either the outdoor living area or the building façade, whichever is closer to the Project site.

For purposes of this HRA, receptors include both residential and non-residential (worker) land uses in the vicinity of the Project. These receptors are included in the HRA since residents and workers may be exposed at these locations over a long-term duration of 30 and 25 years, respectively. This methodology is consistent with SCAQMD and OEHHA recommended guidance.

Any impacts to residents or workers located further away from the Project site than the modeled residential and workers would have a lesser impact than what has already been disclosed in the HRA at the MEIR and MEIW because concentrations dissipate with distance.

Consistent with SCAQMD modeling guidance, all receptors were set to existing elevation height so that only ground-level concentrations are analyzed (11). United States Geological Survey (USGS) Digital Elevation Model (DEM) terrain data based on a 7.5-minute topographic quadrangle map series using AERMAP was utilized in the HRA modeling to set elevations (12).

Discrete variants for daily breathing rates, exposure frequency, and exposure duration were obtained from relevant distribution profiles presented in the 2015 OEHHA Guidelines. Tables 2-6 through 2-7 summarize the Exposure Parameters for Residents and Workers based on 2015 OEHHA Guidelines. Appendix 2.4 includes the detailed risk calculation.

TABLE 2-6: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (CONSTRUCTION ACTIVITY)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (days/year)	Exposure Time (hours/day)
0 to 2	1,090	10	2	0.85	345	8

TABLE 2-7: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (30 YEAR RESIDENTIAL)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (days/year)	Exposure Time (hours/day)
-0.25 to 0	361	10	0.25	0.85	350	24
0 to 2	1,090	10	2	0.85	350	24

2 to 16	572	3	14	0.72	350	24
16 to 30	261	1	14	0.73	350	24

TABLE 2-8: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (25 YEAR WORKER)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Exposure Frequency (days/year)	Exposure Time (hours/day)
16 to 41	230	1	25	250	12

2.4 CARCINOGENIC CHEMICAL RISK

The SCAQMD CEQA Air Quality Handbook (1993) states that emissions of toxic air contaminants (TACs) are considered significant if a HRA shows an increased risk of greater than 10 in one million. Based on guidance from the SCAQMD in the document Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (2), for purposes of this analysis, 10 in one million is used as the cancer risk threshold for the proposed Project.

Excess cancer risks are estimated as the upper-bound incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to potential carcinogens over a specified exposure duration. The estimated risk is expressed as a unitless probability. The cancer risk attributed to a chemical is calculated by multiplying the chemical intake or dose at the human exchange boundaries (e.g., lungs) by the chemical-specific cancer potency factor (CPF). A risk level of 10 in one million implies a likelihood that up to 10 people, out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of toxic air contaminants over a specified duration of time.

Guidance from CARB and the California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA) recommends a refinement to the standard point estimate approach when alternate human body weights and breathing rates are utilized to assess risk for susceptible subpopulations such as children. For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose. Once determined, contaminant dose is multiplied by the cancer potency factor (CPF) in units of inverse dose expressed in milligrams per kilogram per day (mg/kg/day)-1 to derive the cancer risk estimate. Therefore, to assess exposures, the following dose algorithm was utilized.

$$DOSEair = (Cair \times [BR/BW] \times A \times EF) \times (1 \times 10^{-6})$$

Where:

DOSEair = chronic daily intake (mg/kg/day)

Cair = concentration of contaminant in air (ug/m3)

[BR/BW] = daily breathing rate normalized to body weight (L/kg BW-day)

A	=	inhalation absorption factor
EF	=	exposure frequency (days/365 days)
BW	=	body weight (kg)
1 x 10 -6	=	conversion factors (ug to mg, L to m3)

RISKair = DOSEair x CPF x ED/AT

Where:

DOSEair	=	chronic daily intake (mg/kg/day)
CPF	=	cancer potency factor
ED	=	number of years within particular age group
AT	=	averaging time

2.5 NON-CARCINOGENIC EXPOSURES

An evaluation of the potential noncarcinogenic effects of chronic exposures was also conducted. Adverse health effects are evaluated by comparing a compound's annual concentration with its toxicity factor or Reference Exposure Level (REL). The REL for diesel particulates was obtained from OEHHA for this analysis. The chronic reference exposure level (REL) for DPM was established by OEHHA as 5 $\mu g/m^3$ (OEHHA Toxicity Criteria Database, http://www.oehha.org/risk/chemicaldb/index.asp).

The non-cancer hazard index was calculated (consistent with SCAQMD methodology) as follows:

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

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

Where:

HI_{DPM}	=	Hazard Index; an expression of the potential for non-cancer health effects.
C_{DPM}	=	Annual average DPM concentration ($\mu g/m^3$).
REL_{DPM}	=	Reference exposure level (REL) for DPM; the DPM concentration at which no adverse health effects are anticipated.

For purposes of this analysis the hazard index for the respiratory endpoint totaled less than one for all receptors in the project vicinity, and thus is less than significant.

2.6 POTENTIAL PROJECT-RELATED DPM SOURCE CANCER AND NON-CANCER RISKS

CONSTRUCTION IMPACTS

The land use with the greatest potential exposure to Project construction DPM source emissions is Location R3 which is located approximately 803 feet south of the Project site at an existing residence located at 504 South Quince Avenue. R3 is placed at the private outdoor living area (backyard) facing the Project site. At the MEIR, the maximum incremental cancer risk attributable to Project construction DPM source emissions is estimated at 0.51 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction activity. All other receptors during construction activity would experience less risk than what is identified for this location. The nearest modeled receptors are illustrated on Exhibit 2-D.

OPERATIONAL IMPACTS

Residential Exposure Scenario:

The residential land use with the greatest potential exposure to Project DPM source emissions is Location R3 which is located approximately 803 feet south of the Project site at an existing residence located at 504 South Quince Avenue. R3 is placed at the private outdoor living area (backyard) facing the Project site. At the MEIR, the maximum incremental cancer risk attributable to Project DPM source emissions is estimated at 0.05 in one million, which is less than the SCAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Because all other modeled residential receptors are exposed to lesser concentrations and are located at a greater distance from the Project site and primary truck route than the MEIR analyzed herein, and TACs generally dissipates with distance from the source, all other residential receptors in the vicinity of the Project site would be exposed to less emissions and therefore less risk than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to nearby residences. The nearest modeled receptors are illustrated on Exhibit 2-D.

Worker Exposure Scenario[3]*:*

The worker receptor land use with the greatest potential exposure to Project DPM source emissions is Location R7, which represents the adjacent potential worker receptor approximately 108 feet east of the Project site. At the MEIW, the maximum incremental cancer risk impact is 0.04 in one million which is less than the SCAQMD's threshold of 10 in one million. Maximum

3 SCAQMD guidance does not require assessment of the potential health risk to on-site workers. Excerpts from the document OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines—The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2003), also indicate that it is not necessary to examine the health effects to on-site workers unless required by RCRA (Resource Conservation and Recovery Act) / CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) or the worker resides on-site.

non-cancer risks at this same location were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Because all other modeled worker receptors are located at a greater distance than the MEIW analyzed herein, and DPM dissipates with distance from the source, all other worker receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIW identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent workers. The nearest modeled receptors are illustrated on Exhibit 2-D.

School Child Exposure Scenario:

Proximity to sources of toxics is critical to determining the impact. In traffic-related studies, the additional non-cancer health risk attributable to proximity was seen within 1,000 feet and was strongest within 300 feet. California freeway studies show about a 70-percent drop-off in particulate pollution levels at 500 feet. Based on California Air Resources Board (CARB) and SCAQMD emissions and modeling analyses, an 80-percent drop-off in pollutant concentrations is expected at approximately 1,000 feet from a distribution center (1).

The 1,000-foot evaluation distance is supported by research-based findings concerning Toxic Air Contaminant (TAC) emission dispersion rates from roadways and large sources showing that emissions diminish substantially between 500 and 1,000 feet from emission sources.

A one-quarter mile radius, or 1,320 feet, is commonly utilized for identifying sensitive receptors, such as schools, that may be impacted by a proposed project. This radius is more robust than, and therefore provides a more health protective scenario for evaluation than the 1,000-foot impact radius identified above.

There are no schools located within a ¼ mile of the Project site. The nearest schools are Rialto Middle School, located approximately 1,447 feet north of the Project site, and Charlotte N. Werner Elementary School, located approximately 1,565 feet northeast of the Project site. Although there is no reasonable potential that TAC emissions would cause significant health impacts at distances of more than ¼ mile from the air pollution source, the potential health risk impacts to these schools were evaluated as part of this analysis. At the maximally exposed individual school child (MEISC), the maximum incremental cancer risk impact attributable to the Project is calculated to be <0.01 in one million, which is less than the significance threshold of 10 in one million. At this same location, non-cancer risks attributable to the Project were calculated to be <0.01, which would not exceed the applicable significance threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to nearby school children.

CONSTRUCTION AND OPERATIONAL IMPACTS

The land use with the greatest potential exposure to Project construction and operational DPM source emissions is Location R3. At the MEIR, the maximum incremental cancer risk attributable to Project construction and operational DPM source emissions is estimated at 0.51 in one million, which is less than the threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction and operational activity. All other receptors during construction and

operational activity would experience less risk than what is identified for this location. The nearest modeled receptors are illustrated on Exhibit 2-D.

EXHIBIT 2-D: RECEPTOR LOCATIONS



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3 REFERENCES

1. **Air Resources Board.** *Air Quality and Land Use Handbook: A Community Health Perspective.* 2005.
2. **South Coast Air Quality Managment District.** Mobile Source Toxics Analysis. [Online] 2003. http://www.aqmd.gov/ceqa/handbook/mobile_toxic/mobile_toxic.html.
3. **Goss, Tracy A and Kroeger, Amy.** White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. [Online] South Coast Air Quality Management District, 2003. [Cited: June 6, 2019.] http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper.pdf?sfvrsn=2.
4. **Urban Crossroads, Inc.** *Durst Drive Warehouse Air Quality Impact Analysis.* 2022.
5. **California Air Resources Board.** EMFAC 2017. [Online] https://www.arb.ca.gov/emfac/2017/.
6. **California Department of Transportation.** EMFAC Software. [Online] http://www.dot.ca.gov/hq/env/air/pages/emfac.htm.
7. **Wong, Jillian.** *Planning, Rule Development & Area Sources.* December 22, 2016.
8. **Environmental Protection Agency.** User's Guide for the AMS/EPA Regulatory Model (AERMOD). [Online] 2019. https://www3.epa.gov/ttn/scram/models/aermod/aermod_userguide.pdf.
9. —. User's Guide for the AMS/EPA Regulatory Model (AERMOD). [Online] April 2018. https://www3.epa.gov/ttn/scram/models/aermod/aermod_userguide.pdf.
10. **South Coast Air Quality Management District.** Data for AERMOD. [Online] [Cited: December 16, 2021.] https://www.aqmd.gov/home/air-quality/air-quality-data-studies/meteorological-data/data-for-aermod.
11. —. South Coast AQMD Modeling Guidance for AERMOD. [Online] [Cited: September 18, 2019.] http://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance.
12. **Environmental Protection Agency.** User's Guide for the AERMOD Terrain Preprocessor (AERMAP). [Online] 2018. https://gaftp.epa.gov/Air/aqmg/SCRAM/models/related/aermap/aermap_userguide_v18081.pdf.

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4 CERTIFICATIONS

The contents of this health risk assessment represent an accurate depiction of the impacts to sensitive receptors associated with the proposed Durst Drive Warehouse Project. The information contained in this health risk assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me at (949) 660-1994.

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EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Environmental Site Assessment – American Society for Testing and Materials • June 2013
Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 2.1:

CALEEMOD OUTPUTS

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Durst Drive Warehouse (Construction - Unmitigated)

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	203.35	1000sqft	4.67	203,351.00	0
Parking Lot	183.00	Space	1.10	48,110.00	0
Other Asphalt Surfaces	145.08	1000sqft	3.33	145,079.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Project area is 9.10 acres

Construction Phase - Construction anticipated to begin July 2022 and end in June 2023

Off-road Equipment - Equipment based on consultation with Project Team

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment -

Off-road Equipment - Hours are based on an 8-hour workday

Grading - Analysis conservatively assumes that up to 10 acres can be disturbed per day

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition -

Trips and VMT - Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction

Architectural Coating - Rule 1113

Vehicle Trips - Construction run only

Energy Use - Construction run only

Water And Wastewater - Construction run only

Solid Waste - Construction run only

Construction Off-road Equipment Mitigation - Rule 403

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblConstructionPhase	NumDays	230.00	200.00
tblConstructionPhase	PhaseEndDate	9/21/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	7/27/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	8/24/2023	6/15/2023
tblConstructionPhase	PhaseStartDate	8/25/2023	5/19/2023
tblConstructionPhase	PhaseStartDate	7/28/2023	5/19/2023
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	LightingElect	1.17	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	0.33	0.00
tblEnergyUse	T24NG	1.98	0.00
tblGrading	AcresOfGrading	90.00	200.00
tblGrading	AcresOfGrading	35.00	100.00
tblGrading	MaterialExported	0.00	15,935.00
tblLandUse	LandUseSquareFeet	73,200.00	48,110.00
tblLandUse	LotAcreage	1.65	1.10

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	191.15	0.00
tblTripsAndVMT	HaulingTripLength	20.00	7.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	65.00	52.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CNW_TL	6.90	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	0.00
tblVehicleTrips	ST_TR	1.74	0.00
tblVehicleTrips	SU_TR	1.74	0.00
tblVehicleTrips	WD_TR	1.74	0.00
tblWater	IndoorWaterUseRate	47,024,687.50	0.00

2.0 Emissions Summary

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	4.8320	63.8428	29.4079	0.1305	28.8917	2.1590	31.0507	11.1347	1.9864	13.1210	0.0000	13,362.3363	13,362.3363	2.4459	1.0304	13,730.5347
2023	55.1350	40.4646	43.2193	0.1005	2.7363	1.7471	4.4834	0.7333	1.6300	2.3633	0.0000	9,885.6493	9,885.6493	1.9251	0.1990	9,993.0868
Maximum	**55.1350**	**63.8428**	**43.2193**	**0.1305**	**28.8917**	**2.1590**	**31.0507**	**11.1347**	**1.9864**	**13.1210**	**0.0000**	**13,362.3363**	**13,362.3363**	**2.4459**	**1.0304**	**13,730.5347**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	4.8320	63.8428	29.4079	0.1305	11.4022	2.1590	13.5612	4.3784	1.9864	6.3648	0.0000	13,362.3363	13,362.3363	2.4459	1.0304	13,730.5347
2023	55.1350	40.4646	43.2193	0.1005	2.7363	1.7471	4.4834	0.7333	1.6300	2.3633	0.0000	9,885.6493	9,885.6493	1.9251	0.1990	9,993.0867
Maximum	**55.1350**	**63.8428**	**43.2193**	**0.1305**	**11.4022**	**2.1590**	**13.5612**	**4.3784**	**1.9864**	**6.3648**	**0.0000**	**13,362.3363**	**13,362.3363**	**2.4459**	**1.0304**	**13,730.5347**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	55.30	0.00	49.22	56.93	0.00	43.63	0.00	0.00	0.00	0.00	0.00	0.00

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6310	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.6310**	**4.9000e-004**	**0.0543**	**0.0000**	**0.0000**	**1.9000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**1.9000e-004**		**0.1163**	**0.1163**	**3.1000e-004**	**0.0000**	**0.1239**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6310	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.6310**	**4.9000e-004**	**0.0543**	**0.0000**	**0.0000**	**1.9000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**1.9000e-004**		**0.1163**	**0.1163**	**3.1000e-004**	**0.0000**	**0.1239**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2022	7/28/2022	5	20	
2	Site Preparation	Site Preparation	7/29/2022	8/11/2022	5	10	
3	Grading	Grading	8/12/2022	9/8/2022	5	20	
4	Building Construction	Building Construction	9/9/2022	6/15/2023	5	200	
5	Paving	Paving	5/19/2023	6/15/2023	5	20	
6	Architectural Coating	Architectural Coating	5/19/2023	6/15/2023	5	20	

Acres of Grading (Site Preparation Phase): 100

Acres of Grading (Grading Phase): 200

Acres of Paving: 4.43

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 305,027; Non-Residential Outdoor: 101,676; Striped Parking Area: 11,591 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	8.00	78	0.48
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Demolition	Excavators	2	8.00	158	0.38
Grading	Excavators	0	8.00	158	0.38

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Demolition	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Grading	Crawler Tractors	3	8.00	212	0.43
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Crawler Tractors	3	8.00	212	0.43

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	5.00	232.00	14.70	6.90	7.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	5.00	1,992.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	167.00	52.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5144	0.0000	2.5144	0.3807	0.0000	0.3807			0.0000			0.0000
Off-Road	0.4742	4.4788	7.8918	0.0124		0.2062	0.2062		0.1897	0.1897		1,199.6094	1,199.6094	0.3880		1,209.3089
Total	**0.4742**	**4.4788**	**7.8918**	**0.0124**	**2.5144**	**0.2062**	**2.7206**	**0.3807**	**0.1897**	**0.5704**		**1,199.6094**	**1,199.6094**	**0.3880**		**1,209.3089**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0257	0.7150	0.2792	2.6400e-003	0.0713	5.9200e-003	0.0772	0.0196	5.6700e-003	0.0252		286.7318	286.7318	0.0118	0.0454	300.5609
Vendor	8.7100e-003	0.2190	0.0804	9.3000e-004	0.0320	2.6100e-003	0.0346	9.2200e-003	2.4900e-003	0.0117		100.0344	100.0344	2.7000e-003	0.0148	104.5134
Worker	0.0339	0.0215	0.3296	8.3000e-004	0.0894	4.7000e-004	0.0899	0.0237	4.3000e-004	0.0242		83.9654	83.9654	2.1800e-003	2.0900e-003	84.6427
Total	**0.0683**	**0.9555**	**0.6891**	**4.4000e-003**	**0.1927**	**9.0000e-003**	**0.2017**	**0.0525**	**8.5900e-003**	**0.0611**		**470.7316**	**470.7316**	**0.0167**	**0.0623**	**489.7170**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9806	0.0000	0.9806	0.1485	0.0000	0.1485			0.0000			0.0000
Off-Road	0.4742	4.4788	7.8918	0.0124		0.2062	0.2062		0.1897	0.1897	0.0000	1,199.6094	1,199.6094	0.3880		1,209.3089
Total	**0.4742**	**4.4788**	**7.8918**	**0.0124**	**0.9806**	**0.2062**	**1.1868**	**0.1485**	**0.1897**	**0.3382**	**0.0000**	**1,199.6094**	**1,199.6094**	**0.3880**		**1,209.3089**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0257	0.7150	0.2792	2.6400e-003	0.0713	5.9200e-003	0.0772	0.0196	5.6700e-003	0.0252		286.7318	286.7318	0.0118	0.0454	300.5609
Vendor	8.7100e-003	0.2190	0.0804	9.3000e-004	0.0320	2.6100e-003	0.0346	9.2200e-003	2.4900e-003	0.0117		100.0344	100.0344	2.7000e-003	0.0148	104.5134
Worker	0.0339	0.0215	0.3296	8.3000e-004	0.0894	4.7000e-004	0.0899	0.0237	4.3000e-004	0.0242		83.9654	83.9654	2.1800e-003	2.0900e-003	84.6427
Total	**0.0683**	**0.9555**	**0.6891**	**4.4000e-003**	**0.1927**	**9.0000e-003**	**0.2017**	**0.0525**	**8.5900e-003**	**0.0611**		**470.7316**	**470.7316**	**0.0167**	**0.0623**	**489.7170**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					28.6713	0.0000	28.6713	11.0758	0.0000	11.0758			0.0000			0.0000
Off-Road	4.4735	50.3453	19.9794	0.0569		2.1564	2.1564		1.9839	1.9839		5,508.7626	5,508.7626	1.7817		5,553.3037
Total	**4.4735**	**50.3453**	**19.9794**	**0.0569**	**28.6713**	**2.1564**	**30.8277**	**11.0758**	**1.9839**	**13.0597**		**5,508.7626**	**5,508.7626**	**1.7817**		**5,553.3037**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2300e-003	0.1314	0.0482	5.6000e-004	0.0192	1.5600e-003	0.0208	5.5300e-003	1.5000e-003	7.0300e-003		60.0207	60.0207	1.6200e-003	8.8800e-003	62.7081
Worker	0.0762	0.0483	0.7415	1.8600e-003	0.2012	1.0600e-003	0.2023	0.0534	9.7000e-004	0.0543		188.9222	188.9222	4.9100e-003	4.7000e-003	190.4461
Total	**0.0815**	**0.1797**	**0.7897**	**2.4200e-003**	**0.2204**	**2.6200e-003**	**0.2230**	**0.0589**	**2.4700e-003**	**0.0614**		**248.9429**	**248.9429**	**6.5300e-003**	**0.0136**	**253.1541**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					11.1818	0.0000	11.1818	4.3196	0.0000	4.3196			0.0000			0.0000
Off-Road	4.4735	50.3453	19.9794	0.0569		2.1564	2.1564		1.9839	1.9839	0.0000	5,508.7626	5,508.7626	1.7817		5,553.3037
Total	**4.4735**	**50.3453**	**19.9794**	**0.0569**	**11.1818**	**2.1564**	**13.3382**	**4.3196**	**1.9839**	**6.3035**	**0.0000**	**5,508.7626**	**5,508.7626**	**1.7817**		**5,553.3037**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2300e-003	0.1314	0.0482	5.6000e-004	0.0192	1.5600e-003	0.0208	5.5300e-003	1.5000e-003	7.0300e-003		60.0207	60.0207	1.6200e-003	8.8800e-003	62.7081
Worker	0.0762	0.0483	0.7415	1.8600e-003	0.2012	1.0600e-003	0.2023	0.0534	9.7000e-004	0.0543		188.9222	188.9222	4.9100e-003	4.7000e-003	190.4461
Total	**0.0815**	**0.1797**	**0.7897**	**2.4200e-003**	**0.2204**	**2.6200e-003**	**0.2230**	**0.0589**	**2.4700e-003**	**0.0614**		**248.9429**	**248.9429**	**6.5300e-003**	**0.0136**	**253.1541**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					16.7172	0.0000	16.7172	4.4690	0.0000	4.4690			0.0000			0.0000
Off-Road	4.3704	50.0009	25.0442	0.0691		1.9646	1.9646		1.8074	1.8074		6,694.3474	6,694.3474	2.1651		6,748.4746
Total	**4.3704**	**50.0009**	**25.0442**	**0.0691**	**16.7172**	**1.9646**	**18.6817**	**4.4690**	**1.8074**	**6.2763**		**6,694.3474**	**6,694.3474**	**2.1651**		**6,748.4746**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3766	13.5747	3.5418	0.0586	1.7442	0.1426	1.8868	0.4783	0.1364	0.6147		6,379.0322	6,379.0322	0.2732	1.0109	6,687.1006
Vendor	8.7100e-003	0.2190	0.0804	9.3000e-004	0.0320	2.6100e-003	0.0346	9.2200e-003	2.4900e-003	0.0117		100.0344	100.0344	2.7000e-003	0.0148	104.5134
Worker	0.0762	0.0483	0.7415	1.8600e-003	0.2012	1.0600e-003	0.2023	0.0534	9.7000e-004	0.0543		188.9222	188.9222	4.9100e-003	4.7000e-003	190.4461
Total	**0.4616**	**13.8419**	**4.3637**	**0.0614**	**1.9775**	**0.1463**	**2.1237**	**0.5409**	**0.1399**	**0.6808**		**6,667.9889**	**6,667.9889**	**0.2808**	**1.0304**	**6,982.0601**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5197	0.0000	6.5197	1.7429	0.0000	1.7429			0.0000			0.0000
Off-Road	4.3704	50.0009	25.0442	0.0691		1.9646	1.9646		1.8074	1.8074	0.0000	6,694.3474	6,694.3474	2.1651		6,748.4746
Total	**4.3704**	**50.0009**	**25.0442**	**0.0691**	**6.5197**	**1.9646**	**8.4843**	**1.7429**	**1.8074**	**3.5503**	**0.0000**	**6,694.3474**	**6,694.3474**	**2.1651**		**6,748.4746**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3766	13.5747	3.5418	0.0586	1.7442	0.1426	1.8868	0.4783	0.1364	0.6147		6,379.0322	6,379.0322	0.2732	1.0109	6,687.1006
Vendor	8.7100e-003	0.2190	0.0804	9.3000e-004	0.0320	2.6100e-003	0.0346	9.2200e-003	2.4900e-003	0.0117		100.0344	100.0344	2.7000e-003	0.0148	104.5134
Worker	0.0762	0.0483	0.7415	1.8600e-003	0.2012	1.0600e-003	0.2023	0.0534	9.7000e-004	0.0543		188.9222	188.9222	4.9100e-003	4.7000e-003	190.4461
Total	**0.4616**	**13.8419**	**4.3637**	**0.0614**	**1.9775**	**0.1463**	**2.1237**	**0.5409**	**0.1399**	**0.6808**		**6,667.9889**	**6,667.9889**	**0.2808**	**1.0304**	**6,982.0601**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7963	29.7637	17.6698	0.0430		1.2743	1.2743		1.1892	1.1892		4,110.5322	4,110.5322	1.1153		4,138.4135
Total	**2.7963**	**29.7637**	**17.6698**	**0.0430**		**1.2743**	**1.2743**		**1.1892**	**1.1892**		**4,110.5322**	**4,110.5322**	**1.1153**		**4,138.4135**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0906	2.2771	0.8357	9.7000e-003	0.3332	0.0271	0.3603	0.0959	0.0259	0.1219		1,040.3579	1,040.3579	0.0281	0.1540	1,086.9396
Worker	0.7073	0.4480	6.8797	0.0172	1.8667	9.8000e-003	1.8765	0.4951	9.0200e-003	0.5041		1,752.7785	1,752.7785	0.0456	0.0436	1,766.9162
Total	**0.7979**	**2.7251**	**7.7154**	**0.0269**	**2.1998**	**0.0369**	**2.2367**	**0.5910**	**0.0349**	**0.6259**		**2,793.1364**	**2,793.1364**	**0.0737**	**0.1976**	**2,853.8558**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7963	29.7637	17.6698	0.0430		1.2743	1.2743		1.1892	1.1892	0.0000	4,110.5322	4,110.5322	1.1153		4,138.4135
Total	**2.7963**	**29.7637**	**17.6698**	**0.0430**		**1.2743**	**1.2743**		**1.1892**	**1.1892**	**0.0000**	**4,110.5322**	**4,110.5322**	**1.1153**		**4,138.4135**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0906	2.2771	0.8357	9.7000e-003	0.3332	0.0271	0.3603	0.0959	0.0259	0.1219		1,040.3579	1,040.3579	0.0281	0.1540	1,086.9396
Worker	0.7073	0.4480	6.8797	0.0172	1.8667	9.8000e-003	1.8765	0.4951	9.0200e-003	0.5041		1,752.7785	1,752.7785	0.0456	0.0436	1,766.9162
Total	**0.7979**	**2.7251**	**7.7154**	**0.0269**	**2.1998**	**0.0369**	**2.2367**	**0.5910**	**0.0349**	**0.6259**		**2,793.1364**	**2,793.1364**	**0.0737**	**0.1976**	**2,853.8558**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5519	26.2044	17.3471	0.0430		1.1169	1.1169		1.0422	1.0422		4,108.2392	4,108.2392	1.1101		4,135.9924
Total	**2.5519**	**26.2044**	**17.3471**	**0.0430**		**1.1169**	**1.1169**		**1.0422**	**1.0422**		**4,108.2392**	**4,108.2392**	**1.1101**		**4,135.9924**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0609	1.8239	0.7654	9.3000e-003	0.3332	0.0137	0.3469	0.0959	0.0131	0.1090		997.9745	997.9745	0.0261	0.1474	1,042.5439
Worker	0.6530	0.3940	6.2977	0.0167	1.8667	9.2200e-003	1.8759	0.4951	8.4900e-003	0.5035		1,706.1865	1,706.1865	0.0408	0.0401	1,719.1613
Total	**0.7139**	**2.2180**	**7.0631**	**0.0260**	**2.1998**	**0.0229**	**2.2228**	**0.5910**	**0.0216**	**0.6126**		**2,704.1610**	**2,704.1610**	**0.0668**	**0.1875**	**2,761.7052**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5519	26.2044	17.3471	0.0430		1.1169	1.1169		1.0422	1.0422	0.0000	4,108.2392	4,108.2392	1.1101		4,135.9924
Total	**2.5519**	**26.2044**	**17.3471**	**0.0430**		**1.1169**	**1.1169**		**1.0422**	**1.0422**	**0.0000**	**4,108.2392**	**4,108.2392**	**1.1101**		**4,135.9924**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0609	1.8239	0.7654	9.3000e-003	0.3332	0.0137	0.3469	0.0959	0.0131	0.1090		997.9745	997.9745	0.0261	0.1474	1,042.5439
Worker	0.6530	0.3940	6.2977	0.0167	1.8667	9.2200e-003	1.8759	0.4951	8.4900e-003	0.5035		1,706.1865	1,706.1865	0.0408	0.0401	1,719.1613
Total	**0.7139**	**2.2180**	**7.0631**	**0.0260**	**2.1998**	**0.0229**	**2.2228**	**0.5910**	**0.0216**	**0.6126**		**2,704.1610**	**2,704.1610**	**0.0668**	**0.1875**	**2,761.7052**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.5803					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6131**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0587	0.0354	0.5657	1.5000e-003	0.1677	8.3000e-004	0.1685	0.0445	7.6000e-004	0.0452		153.2503	153.2503	3.6600e-003	3.6000e-003	154.4157
Total	**0.0587**	**0.0354**	**0.5657**	**1.5000e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.6000e-004**	**0.0452**		**153.2503**	**153.2503**	**3.6600e-003**	**3.6000e-003**	**154.4157**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.5803					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6131**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0587	0.0354	0.5657	1.5000e-003	0.1677	8.3000e-004	0.1685	0.0445	7.6000e-004	0.0452		153.2503	153.2503	3.6600e-003	3.6000e-003	154.4157
Total	**0.0587**	**0.0354**	**0.5657**	**1.5000e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.6000e-004**	**0.0452**		**153.2503**	**153.2503**	**3.6600e-003**	**3.6000e-003**	**154.4157**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	49.8129					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944		375.2641	375.2641	0.0225		375.8253
Total	**50.0685**	**1.7373**	**2.4148**	**3.9600e-003**		**0.0944**	**0.0944**		**0.0944**	**0.0944**		**375.2641**	**375.2641**	**0.0225**		**375.8253**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1290	0.0779	1.2445	3.2900e-003	0.3689	1.8200e-003	0.3707	0.0978	1.6800e-003	0.0995		337.1506	337.1506	8.0500e-003	7.9300e-003	339.7145
Total	**0.1290**	**0.0779**	**1.2445**	**3.2900e-003**	**0.3689**	**1.8200e-003**	**0.3707**	**0.0978**	**1.6800e-003**	**0.0995**		**337.1506**	**337.1506**	**8.0500e-003**	**7.9300e-003**	**339.7145**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	49.8129					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944	0.0000	375.2641	375.2641	0.0225		375.8253
Total	**50.0685**	**1.7373**	**2.4148**	**3.9600e-003**		**0.0944**	**0.0944**		**0.0944**	**0.0944**	**0.0000**	**375.2641**	**375.2641**	**0.0225**		**375.8253**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1290	0.0779	1.2445	3.2900e-003	0.3689	1.8200e-003	0.3707	0.0978	1.6800e-003	0.0995		337.1506	337.1506	8.0500e-003	7.9300e-003	339.7145
Total	**0.1290**	**0.0779**	**1.2445**	**3.2900e-003**	**0.3689**	**1.8200e-003**	**0.3707**	**0.0978**	**1.6800e-003**	**0.0995**		**337.1506**	**337.1506**	**8.0500e-003**	**7.9300e-003**	**339.7145**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Parking Lot	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unrefrigerated Warehouse-No Rail	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.6310	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Unmitigated	4.6310	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.0948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0200e-003	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Total	**4.6310**	**4.9000e-004**	**0.0543**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1163**	**0.1163**	**3.1000e-004**		**0.1239**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.0948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0200e-003	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Total	**4.6310**	**4.9000e-004**	**0.0543**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1163**	**0.1163**	**3.1000e-004**		**0.1239**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Durst Drive Warehouse (Construction - Unmitigated)

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	203.35	1000sqft	4.67	203,351.00	0
Parking Lot	183.00	Space	1.10	48,110.00	0
Other Asphalt Surfaces	145.08	1000sqft	3.33	145,079.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Project area is 9.10 acres

Construction Phase - Construction anticipated to begin July 2022 and end in June 2023

Off-road Equipment - Equipment based on consultation with Project Team

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment -

Off-road Equipment - Hours are based on an 8-hour workday

Grading - Analysis conservatively assumes that up to 10 acres can be disturbed per day

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition -

Trips and VMT - Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction

Architectural Coating - Rule 1113

Vehicle Trips - Construction run only

Energy Use - Construction run only

Water And Wastewater - Construction run only

Solid Waste - Construction run only

Construction Off-road Equipment Mitigation - Rule 403

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblConstructionPhase	NumDays	230.00	200.00
tblConstructionPhase	PhaseEndDate	9/21/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	7/27/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	8/24/2023	6/15/2023
tblConstructionPhase	PhaseStartDate	8/25/2023	5/19/2023
tblConstructionPhase	PhaseStartDate	7/28/2023	5/19/2023
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	LightingElect	1.17	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	0.33	0.00
tblEnergyUse	T24NG	1.98	0.00
tblGrading	AcresOfGrading	90.00	200.00
tblGrading	AcresOfGrading	35.00	100.00
tblGrading	MaterialExported	0.00	15,935.00
tblLandUse	LandUseSquareFeet	73,200.00	48,110.00
tblLandUse	LotAcreage	1.65	1.10

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	191.15	0.00
tblTripsAndVMT	HaulingTripLength	20.00	7.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	65.00	52.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CNW_TL	6.90	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	0.00
tblVehicleTrips	ST_TR	1.74	0.00
tblVehicleTrips	SU_TR	1.74	0.00
tblVehicleTrips	WD_TR	1.74	0.00
tblWater	IndoorWaterUseRate	47,024,687.50	0.00

2.0 Emissions Summary

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	4.8131	64.5343	29.3583	0.1304	28.8917	2.1590	31.0507	11.1347	1.9864	13.1210	0.0000	13,349.3932	13,349.3932	2.4451	1.0313	13,717.8501
2023	55.0998	40.5933	41.8083	0.0985	2.7363	1.7471	4.4835	0.7333	1.6301	2.3634	0.0000	9,681.5345	9,681.5345	1.9250	0.2011	9,789.5996
Maximum	**55.0998**	**64.5343**	**41.8083**	**0.1304**	**28.8917**	**2.1590**	**31.0507**	**11.1347**	**1.9864**	**13.1210**	**0.0000**	**13,349.3932**	**13,349.3932**	**2.4451**	**1.0313**	**13,717.8501**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	4.8131	64.5343	29.3583	0.1304	11.4022	2.1590	13.5613	4.3784	1.9864	6.3648	0.0000	13,349.3932	13,349.3932	2.4451	1.0313	13,717.8501
2023	55.0998	40.5933	41.8083	0.0985	2.7363	1.7471	4.4835	0.7333	1.6301	2.3634	0.0000	9,681.5345	9,681.5345	1.9250	0.2011	9,789.5996
Maximum	**55.0998**	**64.5343**	**41.8083**	**0.1304**	**11.4022**	**2.1590**	**13.5613**	**4.3784**	**1.9864**	**6.3648**	**0.0000**	**13,349.3932**	**13,349.3932**	**2.4451**	**1.0313**	**13,717.8501**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	55.30	0.00	49.22	56.93	0.00	43.63	0.00	0.00	0.00	0.00	0.00	0.00

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6310	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.6310**	**4.9000e-004**	**0.0543**	**0.0000**	**0.0000**	**1.9000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**1.9000e-004**		**0.1163**	**0.1163**	**3.1000e-004**	**0.0000**	**0.1239**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6310	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.6310**	**4.9000e-004**	**0.0543**	**0.0000**	**0.0000**	**1.9000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**1.9000e-004**		**0.1163**	**0.1163**	**3.1000e-004**	**0.0000**	**0.1239**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2022	7/28/2022	5	20	
2	Site Preparation	Site Preparation	7/29/2022	8/11/2022	5	10	
3	Grading	Grading	8/12/2022	9/8/2022	5	20	
4	Building Construction	Building Construction	9/9/2022	6/15/2023	5	200	
5	Paving	Paving	5/19/2023	6/15/2023	5	20	
6	Architectural Coating	Architectural Coating	5/19/2023	6/15/2023	5	20	

Acres of Grading (Site Preparation Phase): 100

Acres of Grading (Grading Phase): 200

Acres of Paving: 4.43

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 305,027; Non-Residential Outdoor: 101,676; Striped Parking Area: 11,591 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	8.00	78	0.48
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Demolition	Excavators	2	8.00	158	0.38
Grading	Excavators	0	8.00	158	0.38

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Demolition	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Grading	Crawler Tractors	3	8.00	212	0.43
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Crawler Tractors	3	8.00	212	0.43

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	5.00	232.00	14.70	6.90	7.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	5.00	1,992.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	167.00	52.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5144	0.0000	2.5144	0.3807	0.0000	0.3807			0.0000			0.0000
Off-Road	0.4742	4.4788	7.8918	0.0124		0.2062	0.2062		0.1897	0.1897		1,199.6094	1,199.6094	0.3880		1,209.3089
Total	**0.4742**	**4.4788**	**7.8918**	**0.0124**	**2.5144**	**0.2062**	**2.7206**	**0.3807**	**0.1897**	**0.5704**		**1,199.6094**	**1,199.6094**	**0.3880**		**1,209.3089**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0239	0.7538	0.2886	2.6400e-003	0.0713	5.9500e-003	0.0772	0.0196	5.6900e-003	0.0252		287.2867	287.2867	0.0117	0.0455	301.1395
Vendor	8.3700e-003	0.2299	0.0832	9.3000e-004	0.0320	2.6100e-003	0.0347	9.2200e-003	2.5000e-003	0.0117		100.1448	100.1448	2.6900e-003	0.0148	104.6310
Worker	0.0326	0.0226	0.2707	7.5000e-004	0.0894	4.7000e-004	0.0899	0.0237	4.3000e-004	0.0242		76.0471	76.0471	2.1800e-003	2.1600e-003	76.7445
Total	**0.0648**	**1.0062**	**0.6425**	**4.3200e-003**	**0.1927**	**9.0300e-003**	**0.2018**	**0.0525**	**8.6200e-003**	**0.0611**		**463.4785**	**463.4785**	**0.0166**	**0.0625**	**482.5150**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9806	0.0000	0.9806	0.1485	0.0000	0.1485			0.0000			0.0000
Off-Road	0.4742	4.4788	7.8918	0.0124		0.2062	0.2062		0.1897	0.1897	0.0000	1,199.6094	1,199.6094	0.3880		1,209.3089
Total	**0.4742**	**4.4788**	**7.8918**	**0.0124**	**0.9806**	**0.2062**	**1.1868**	**0.1485**	**0.1897**	**0.3382**	**0.0000**	**1,199.6094**	**1,199.6094**	**0.3880**		**1,209.3089**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0239	0.7538	0.2886	2.6400e-003	0.0713	5.9500e-003	0.0772	0.0196	5.6900e-003	0.0252		287.2867	287.2867	0.0117	0.0455	301.1395
Vendor	8.3700e-003	0.2299	0.0832	9.3000e-004	0.0320	2.6100e-003	0.0347	9.2200e-003	2.5000e-003	0.0117		100.1448	100.1448	2.6900e-003	0.0148	104.6310
Worker	0.0326	0.0226	0.2707	7.5000e-004	0.0894	4.7000e-004	0.0899	0.0237	4.3000e-004	0.0242		76.0471	76.0471	2.1800e-003	2.1600e-003	76.7445
Total	**0.0648**	**1.0062**	**0.6425**	**4.3200e-003**	**0.1927**	**9.0300e-003**	**0.2018**	**0.0525**	**8.6200e-003**	**0.0611**		**463.4785**	**463.4785**	**0.0166**	**0.0625**	**482.5150**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					28.6713	0.0000	28.6713	11.0758	0.0000	11.0758			0.0000			0.0000
Off-Road	4.4735	50.3453	19.9794	0.0569		2.1564	2.1564		1.9839	1.9839		5,508.7626	5,508.7626	1.7817		5,553.3037
Total	**4.4735**	**50.3453**	**19.9794**	**0.0569**	**28.6713**	**2.1564**	**30.8277**	**11.0758**	**1.9839**	**13.0597**		**5,508.7626**	**5,508.7626**	**1.7817**		**5,553.3037**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0200e-003	0.1379	0.0499	5.6000e-004	0.0192	1.5700e-003	0.0208	5.5300e-003	1.5000e-003	7.0300e-003		60.0869	60.0869	1.6100e-003	8.9000e-003	62.7786
Worker	0.0732	0.0508	0.6091	1.6800e-003	0.2012	1.0600e-003	0.2023	0.0534	9.7000e-004	0.0543		171.1060	171.1060	4.9000e-003	4.8500e-003	172.6750
Total	**0.0783**	**0.1887**	**0.6590**	**2.2400e-003**	**0.2204**	**2.6300e-003**	**0.2230**	**0.0589**	**2.4700e-003**	**0.0614**		**231.1929**	**231.1929**	**6.5100e-003**	**0.0138**	**235.4536**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					11.1818	0.0000	11.1818	4.3196	0.0000	4.3196			0.0000			0.0000
Off-Road	4.4735	50.3453	19.9794	0.0569		2.1564	2.1564		1.9839	1.9839	0.0000	5,508.7626	5,508.7626	1.7817		5,553.3037
Total	**4.4735**	**50.3453**	**19.9794**	**0.0569**	**11.1818**	**2.1564**	**13.3382**	**4.3196**	**1.9839**	**6.3035**	**0.0000**	**5,508.7626**	**5,508.7626**	**1.7817**		**5,553.3037**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0200e-003	0.1379	0.0499	5.6000e-004	0.0192	1.5700e-003	0.0208	5.5300e-003	1.5000e-003	7.0300e-003		60.0869	60.0869	1.6100e-003	8.9000e-003	62.7786
Worker	0.0732	0.0508	0.6091	1.6800e-003	0.2012	1.0600e-003	0.2023	0.0534	9.7000e-004	0.0543		171.1060	171.1060	4.9000e-003	4.8500e-003	172.6750
Total	**0.0783**	**0.1887**	**0.6590**	**2.2400e-003**	**0.2204**	**2.6300e-003**	**0.2230**	**0.0589**	**2.4700e-003**	**0.0614**		**231.1929**	**231.1929**	**6.5100e-003**	**0.0138**	**235.4536**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					16.7172	0.0000	16.7172	4.4690	0.0000	4.4690			0.0000			0.0000
Off-Road	4.3704	50.0009	25.0442	0.0691		1.9646	1.9646		1.8074	1.8074		6,694.3474	6,694.3474	2.1651		6,748.4746
Total	**4.3704**	**50.0009**	**25.0442**	**0.0691**	**16.7172**	**1.9646**	**18.6817**	**4.4690**	**1.8074**	**6.2763**		**6,694.3474**	**6,694.3474**	**2.1651**		**6,748.4746**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3611	14.2528	3.6218	0.0586	1.7442	0.1428	1.8871	0.4783	0.1366	0.6149		6,383.7950	6,383.7950	0.2724	1.0116	6,692.0695
Vendor	8.3700e-003	0.2299	0.0832	9.3000e-004	0.0320	2.6100e-003	0.0347	9.2200e-003	2.5000e-003	0.0117		100.1448	100.1448	2.6900e-003	0.0148	104.6310
Worker	0.0732	0.0508	0.6091	1.6800e-003	0.2012	1.0600e-003	0.2023	0.0534	9.7000e-004	0.0543		171.1060	171.1060	4.9000e-003	4.8500e-003	172.6750
Total	**0.4427**	**14.5334**	**4.3141**	**0.0612**	**1.9775**	**0.1465**	**2.1240**	**0.5409**	**0.1401**	**0.6810**		**6,655.0458**	**6,655.0458**	**0.2800**	**1.0313**	**6,969.3755**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5197	0.0000	6.5197	1.7429	0.0000	1.7429			0.0000			0.0000
Off-Road	4.3704	50.0009	25.0442	0.0691		1.9646	1.9646		1.8074	1.8074	0.0000	6,694.3474	6,694.3474	2.1651		6,748.4746
Total	**4.3704**	**50.0009**	**25.0442**	**0.0691**	**6.5197**	**1.9646**	**8.4843**	**1.7429**	**1.8074**	**3.5503**	**0.0000**	**6,694.3474**	**6,694.3474**	**2.1651**		**6,748.4746**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3611	14.2528	3.6218	0.0586	1.7442	0.1428	1.8871	0.4783	0.1366	0.6149		6,383.7950	6,383.7950	0.2724	1.0116	6,692.0695
Vendor	8.3700e-003	0.2299	0.0832	9.3000e-004	0.0320	2.6100e-003	0.0347	9.2200e-003	2.5000e-003	0.0117		100.1448	100.1448	2.6900e-003	0.0148	104.6310
Worker	0.0732	0.0508	0.6091	1.6800e-003	0.2012	1.0600e-003	0.2023	0.0534	9.7000e-004	0.0543		171.1060	171.1060	4.9000e-003	4.8500e-003	172.6750
Total	**0.4427**	**14.5334**	**4.3141**	**0.0612**	**1.9775**	**0.1465**	**2.1240**	**0.5409**	**0.1401**	**0.6810**		**6,655.0458**	**6,655.0458**	**0.2800**	**1.0313**	**6,969.3755**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7963	29.7637	17.6698	0.0430		1.2743	1.2743		1.1892	1.1892		4,110.5322	4,110.5322	1.1153		4,138.4135
Total	**2.7963**	**29.7637**	**17.6698**	**0.0430**		**1.2743**	**1.2743**		**1.1892**	**1.1892**		**4,110.5322**	**4,110.5322**	**1.1153**		**4,138.4135**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0871	2.3905	0.8651	9.7100e-003	0.3332	0.0272	0.3603	0.0959	0.0260	0.1219		1,041.5055	1,041.5055	0.0279	0.1542	1,088.1624
Worker	0.6795	0.4712	5.6513	0.0156	1.8667	9.8000e-003	1.8765	0.4951	9.0200e-003	0.5041		1,587.4837	1,587.4837	0.0455	0.0450	1,602.0404
Total	**0.7665**	**2.8616**	**6.5164**	**0.0253**	**2.1998**	**0.0370**	**2.2368**	**0.5910**	**0.0350**	**0.6260**		**2,628.9891**	**2,628.9891**	**0.0734**	**0.1993**	**2,690.2028**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7963	29.7637	17.6698	0.0430		1.2743	1.2743		1.1892	1.1892	0.0000	4,110.5322	4,110.5322	1.1153		4,138.4135
Total	**2.7963**	**29.7637**	**17.6698**	**0.0430**		**1.2743**	**1.2743**		**1.1892**	**1.1892**	**0.0000**	**4,110.5322**	**4,110.5322**	**1.1153**		**4,138.4135**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0871	2.3905	0.8651	9.7100e-003	0.3332	0.0272	0.3603	0.0959	0.0260	0.1219		1,041.5055	1,041.5055	0.0279	0.1542	1,088.1624
Worker	0.6795	0.4712	5.6513	0.0156	1.8667	9.8000e-003	1.8765	0.4951	9.0200e-003	0.5041		1,587.4837	1,587.4837	0.0455	0.0450	1,602.0404
Total	**0.7665**	**2.8616**	**6.5164**	**0.0253**	**2.1998**	**0.0370**	**2.2368**	**0.5910**	**0.0350**	**0.6260**		**2,628.9891**	**2,628.9891**	**0.0734**	**0.1993**	**2,690.2028**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5519	26.2044	17.3471	0.0430		1.1169	1.1169		1.0422	1.0422		4,108.2392	4,108.2392	1.1101		4,135.9924
Total	**2.5519**	**26.2044**	**17.3471**	**0.0430**		**1.1169**	**1.1169**		**1.0422**	**1.0422**		**4,108.2392**	**4,108.2392**	**1.1101**		**4,135.9924**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0566	1.9265	0.7890	9.3300e-003	0.3332	0.0138	0.3469	0.0959	0.0132	0.1091		1,000.3947	1,000.3947	0.0259	0.1478	1,045.0953
Worker	0.6290	0.4143	5.1834	0.0151	1.8667	9.2200e-003	1.8759	0.4951	8.4900e-003	0.5035		1,545.7616	1,545.7616	0.0408	0.0414	1,559.1220
Total	**0.6857**	**2.3408**	**5.9723**	**0.0244**	**2.1998**	**0.0230**	**2.2228**	**0.5910**	**0.0217**	**0.6126**		**2,546.1563**	**2,546.1563**	**0.0667**	**0.1892**	**2,604.2174**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5519	26.2044	17.3471	0.0430		1.1169	1.1169		1.0422	1.0422	0.0000	4,108.2392	4,108.2392	1.1101		4,135.9924
Total	**2.5519**	**26.2044**	**17.3471**	**0.0430**		**1.1169**	**1.1169**		**1.0422**	**1.0422**	**0.0000**	**4,108.2392**	**4,108.2392**	**1.1101**		**4,135.9924**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0566	1.9265	0.7890	9.3300e-003	0.3332	0.0138	0.3469	0.0959	0.0132	0.1091		1,000.3947	1,000.3947	0.0259	0.1478	1,045.0953
Worker	0.6290	0.4143	5.1834	0.0151	1.8667	9.2200e-003	1.8759	0.4951	8.4900e-003	0.5035		1,545.7616	1,545.7616	0.0408	0.0414	1,559.1220
Total	**0.6857**	**2.3408**	**5.9723**	**0.0244**	**2.1998**	**0.0230**	**2.2228**	**0.5910**	**0.0217**	**0.6126**		**2,546.1563**	**2,546.1563**	**0.0667**	**0.1892**	**2,604.2174**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.5803					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6131**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0565	0.0372	0.4656	1.3600e-003	0.1677	8.3000e-004	0.1685	0.0445	7.6000e-004	0.0452		138.8409	138.8409	3.6600e-003	3.7200e-003	140.0409
Total	**0.0565**	**0.0372**	**0.4656**	**1.3600e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.6000e-004**	**0.0452**		**138.8409**	**138.8409**	**3.6600e-003**	**3.7200e-003**	**140.0409**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.5803					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6131**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0565	0.0372	0.4656	1.3600e-003	0.1677	8.3000e-004	0.1685	0.0445	7.6000e-004	0.0452		138.8409	138.8409	3.6600e-003	3.7200e-003	140.0409
Total	**0.0565**	**0.0372**	**0.4656**	**1.3600e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.6000e-004**	**0.0452**		**138.8409**	**138.8409**	**3.6600e-003**	**3.7200e-003**	**140.0409**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	49.8129					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944		375.2641	375.2641	0.0225		375.8253
Total	**50.0685**	**1.7373**	**2.4148**	**3.9600e-003**		**0.0944**	**0.0944**		**0.0944**	**0.0944**		**375.2641**	**375.2641**	**0.0225**		**375.8253**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1243	0.0819	1.0243	2.9800e-003	0.3689	1.8200e-003	0.3707	0.0978	1.6800e-003	0.0995		305.4499	305.4499	8.0600e-003	8.1800e-003	308.0900
Total	**0.1243**	**0.0819**	**1.0243**	**2.9800e-003**	**0.3689**	**1.8200e-003**	**0.3707**	**0.0978**	**1.6800e-003**	**0.0995**		**305.4499**	**305.4499**	**8.0600e-003**	**8.1800e-003**	**308.0900**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	49.8129					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944	0.0000	375.2641	375.2641	0.0225		375.8253
Total	**50.0685**	**1.7373**	**2.4148**	**3.9600e-003**		**0.0944**	**0.0944**		**0.0944**	**0.0944**	**0.0000**	**375.2641**	**375.2641**	**0.0225**		**375.8253**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1243	0.0819	1.0243	2.9800e-003	0.3689	1.8200e-003	0.3707	0.0978	1.6800e-003	0.0995		305.4499	305.4499	8.0600e-003	8.1800e-003	308.0900
Total	**0.1243**	**0.0819**	**1.0243**	**2.9800e-003**	**0.3689**	**1.8200e-003**	**0.3707**	**0.0978**	**1.6800e-003**	**0.0995**		**305.4499**	**305.4499**	**8.0600e-003**	**8.1800e-003**	**308.0900**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Parking Lot	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unrefrigerated Warehouse-No Rail	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.6310	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Unmitigated	4.6310	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.0948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0200e-003	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Total	**4.6310**	**4.9000e-004**	**0.0543**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1163**	**0.1163**	**3.1000e-004**		**0.1239**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.0948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0200e-003	4.9000e-004	0.0543	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1163	0.1163	3.1000e-004		0.1239
Total	**4.6310**	**4.9000e-004**	**0.0543**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1163**	**0.1163**	**3.1000e-004**		**0.1239**

7.0 Water Detail

7.1 Mitigation Measures Water

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Durst Drive Warehouse (Operations)

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	203.35	1000sqft	4.67	203,351.00	0
User Defined Industrial	203.35	User Defined Unit	0.00	0.00	0
Parking Lot	183.00	Space	1.10	48,110.00	0
Other Asphalt Surfaces	145.08	1000sqft	3.33	145,079.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Project area is 9.10 acres

Construction Phase - Operatiosn run only

Off-road Equipment - Operatiosn run only

Vehicle Trips - Trip rates based on ITE 11th Edition for High-Cube Transload Short-Term Warehouse (ITE Code 154)

Fleet Mix - Passenger Car Mix estimated based on the CalEEMod default fleet mix and the ratio of LDA, LDT1, LDT2, MDV, & MCY. Truck Mix based ratio of LHDT1, LHDT2, MHDT, and HHDT

Operational Off-Road Equipment - Based on SCAQMD High Cube Warehouse Truck Trip Study White Paper Summary of Busniess Survey Results (2014)

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	7/28/2022	6/30/2022
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.63
tblFleetMix	LDA	0.54	0.58
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.19
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.14
tblFleetMix	LHD2	7.1960e-003	0.00
tblFleetMix	LHD2	7.1960e-003	0.04
tblFleetMix	MCY	0.03	0.03
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.14	0.15
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	5.0710e-003	0.00
tblFleetMix	MH	5.0710e-003	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.20
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LandUseSquareFeet	73,200.00	48,110.00
tblLandUse	LotAcreage	1.65	1.10
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperHorsePower	97.00	200.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblVehicleTrips	CW_TL	16.60	40.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.74	0.79
tblVehicleTrips	ST_TR	0.00	0.15
tblVehicleTrips	SU_TR	1.74	0.73
tblVehicleTrips	SU_TR	0.00	0.14
tblVehicleTrips	WD_TR	1.74	1.18
tblVehicleTrips	WD_TR	0.00	0.23

2.0 Emissions Summary

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6329	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Energy	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
Mobile	1.1012	8.0770	12.3324	0.0627	3.7728	0.0908	3.8636	1.0255	0.0865	1.1120		6,652.6898	6,652.6898	0.2587	0.7364	6,878.6090
Offroad	0.1103	1.0361	0.7492	3.1700e-003		0.0376	0.0376		0.0346	0.0346	0.0000	306.5451	306.5451	0.0991		309.0237
Total	**5.8565**	**9.2236**	**13.2488**	**0.0666**	**3.7728**	**0.1370**	**3.9098**	**1.0255**	**0.1297**	**1.1552**	**0.0000**	**7,091.1396**	**7,091.1396**	**0.3608**	**0.7388**	**7,320.3308**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6329	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Energy	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
Mobile	1.1012	8.0770	12.3324	0.0627	3.7728	0.0908	3.8636	1.0255	0.0865	1.1120		6,652.6898	6,652.6898	0.2587	0.7364	6,878.6090
Offroad	0.1103	1.0361	0.7492	3.1700e-003		0.0376	0.0376		0.0346	0.0346	0.0000	306.5451	306.5451	0.0991		309.0237
Total	**5.8565**	**9.2236**	**13.2488**	**0.0666**	**3.7728**	**0.1370**	**3.9098**	**1.0255**	**0.1297**	**1.1552**	**0.0000**	**7,091.1396**	**7,091.1396**	**0.3608**	**0.7388**	**7,320.3308**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2022	6/30/2022	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Paving: 4.43

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.1012	8.0770	12.3324	0.0627	3.7728	0.0908	3.8636	1.0255	0.0865	1.1120		6,652.6898	6,652.6898	0.2587	0.7364	6,878.6090
Unmitigated	1.1012	8.0770	12.3324	0.0627	3.7728	0.0908	3.8636	1.0255	0.0865	1.1120		6,652.6898	6,652.6898	0.2587	0.7364	6,878.6090

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	239.00	160.30	148.36	920,608	920,608
User Defined Industrial	46.00	30.85	28.55	601,929	601,929
Total	285.00	191.15	176.92	1,522,537	1,522,537

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
User Defined Industrial	40.00	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Parking Lot	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Unrefrigerated Warehouse-No Rail	0.578100	0.060000	0.185300	0.149400	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.027200	0.000000	0.000000
User Defined Industrial	0.000000	0.000000	0.000000	0.000000	0.137300	0.036600	0.195700	0.630400	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
NaturalGas Unmitigated	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1119.82	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0121**	**0.1098**	**0.0922**	**6.6000e-004**		**8.3400e-003**	**8.3400e-003**		**8.3400e-003**	**8.3400e-003**		**131.7439**	**131.7439**	**2.5300e-003**	**2.4200e-003**	**132.5268**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.11982	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0121**	**0.1098**	**0.0922**	**6.6000e-004**		**8.3400e-003**	**8.3400e-003**		**8.3400e-003**	**8.3400e-003**		**131.7439**	**131.7439**	**2.5300e-003**	**2.4200e-003**	**132.5268**

6.0 Area Detail

6.1 Mitigation Measures Area

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.6329	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Unmitigated	4.6329	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.0948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9500e-003	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Total	**4.6329**	**6.8000e-004**	**0.0750**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**0.1608**	**0.1608**	**4.2000e-004**		**0.1714**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.0948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9500e-003	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Total	**4.6329**	**6.8000e-004**	**0.0750**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**0.1608**	**0.1608**	**4.2000e-004**		**0.1714**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Tractors/Loaders/Backhoes	1	4.00	365	200	0.37	CNG

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Tractors/Loaders/ Backhoes	0.1103	1.0361	0.7492	3.1700e-003		0.0376	0.0376		0.0346	0.0346	0.0000	306.5451	306.5451	0.0991		309.0237
Total	**0.1103**	**1.0361**	**0.7492**	**3.1700e-003**		**0.0376**	**0.0376**		**0.0346**	**0.0346**	**0.0000**	**306.5451**	**306.5451**	**0.0991**		**309.0237**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Durst Drive Warehouse (Operations)

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	203.35	1000sqft	4.67	203,351.00	0
User Defined Industrial	203.35	User Defined Unit	0.00	0.00	0
Parking Lot	183.00	Space	1.10	48,110.00	0
Other Asphalt Surfaces	145.08	1000sqft	3.33	145,079.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Project area is 9.10 acres

Construction Phase - Operatiosn run only

Off-road Equipment - Operatiosn run only

Vehicle Trips - Trip rates based on ITE 11th Edition for High-Cube Transload Short-Term Warehouse (ITE Code 154)

Fleet Mix - Passenger Car Mix estimated based on the CalEEMod default fleet mix and the ratio of LDA, LDT1, LDT2, MDV, & MCY. Truck Mix based ratio of LHDT1, LHDT2, MHDT, and HHDT

Operational Off-Road Equipment - Based on SCAQMD High Cube Warehouse Truck Trip Study White Paper Summary of Busniess Survey Results (2014)

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	7/28/2022	6/30/2022
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.63
tblFleetMix	LDA	0.54	0.58
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.19
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.14
tblFleetMix	LHD2	7.1960e-003	0.00
tblFleetMix	LHD2	7.1960e-003	0.04
tblFleetMix	MCY	0.03	0.03
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.14	0.15
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	5.0710e-003	0.00
tblFleetMix	MH	5.0710e-003	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.20
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LandUseSquareFeet	73,200.00	48,110.00
tblLandUse	LotAcreage	1.65	1.10
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperHorsePower	97.00	200.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblVehicleTrips	CW_TL	16.60	40.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.74	0.79
tblVehicleTrips	ST_TR	0.00	0.15
tblVehicleTrips	SU_TR	1.74	0.73
tblVehicleTrips	SU_TR	0.00	0.14
tblVehicleTrips	WD_TR	1.74	1.18
tblVehicleTrips	WD_TR	0.00	0.23

2.0 Emissions Summary

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6329	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Energy	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
Mobile	0.9852	8.4954	11.0905	0.0610	3.7728	0.0909	3.8636	1.0255	0.0866	1.1121		6,477.2384	6,477.2384	0.2602	0.7397	6,704.1869
Offroad	0.1103	1.0361	0.7492	3.1700e-003		0.0376	0.0376		0.0346	0.0346	0.0000	306.5451	306.5451	0.0991		309.0237
Total	**5.7405**	**9.6419**	**12.0069**	**0.0649**	**3.7728**	**0.1371**	**3.9098**	**1.0255**	**0.1297**	**1.1553**	**0.0000**	**6,915.6882**	**6,915.6882**	**0.3623**	**0.7422**	**7,145.9087**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.6329	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Energy	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
Mobile	0.9852	8.4954	11.0905	0.0610	3.7728	0.0909	3.8636	1.0255	0.0866	1.1121		6,477.2384	6,477.2384	0.2602	0.7397	6,704.1869
Offroad	0.1103	1.0361	0.7492	3.1700e-003		0.0376	0.0376		0.0346	0.0346	0.0000	306.5451	306.5451	0.0991		309.0237
Total	**5.7405**	**9.6419**	**12.0069**	**0.0649**	**3.7728**	**0.1371**	**3.9098**	**1.0255**	**0.1297**	**1.1553**	**0.0000**	**6,915.6882**	**6,915.6882**	**0.3623**	**0.7422**	**7,145.9087**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2022	6/30/2022	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Paving: 4.43

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.9852	8.4954	11.0905	0.0610	3.7728	0.0909	3.8636	1.0255	0.0866	1.1121		6,477.2384	6,477.2384	0.2602	0.7397	6,704.1869
Unmitigated	0.9852	8.4954	11.0905	0.0610	3.7728	0.0909	3.8636	1.0255	0.0866	1.1121		6,477.2384	6,477.2384	0.2602	0.7397	6,704.1869

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	239.00	160.30	148.36	920,608	920,608
User Defined Industrial	46.00	30.85	28.55	601,929	601,929
Total	285.00	191.15	176.92	1,522,537	1,522,537

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
User Defined Industrial	40.00	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Parking Lot	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Unrefrigerated Warehouse-No Rail	0.578100	0.060000	0.185300	0.149400	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.027200	0.000000	0.000000
User Defined Industrial	0.000000	0.000000	0.000000	0.000000	0.137300	0.036600	0.195700	0.630400	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
NaturalGas Unmitigated	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1119.82	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0121**	**0.1098**	**0.0922**	**6.6000e-004**		**8.3400e-003**	**8.3400e-003**		**8.3400e-003**	**8.3400e-003**		**131.7439**	**131.7439**	**2.5300e-003**	**2.4200e-003**	**132.5268**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.11982	0.0121	0.1098	0.0922	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.7439	131.7439	2.5300e-003	2.4200e-003	132.5268
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0121**	**0.1098**	**0.0922**	**6.6000e-004**		**8.3400e-003**	**8.3400e-003**		**8.3400e-003**	**8.3400e-003**		**131.7439**	**131.7439**	**2.5300e-003**	**2.4200e-003**	**132.5268**

6.0 Area Detail

6.1 Mitigation Measures Area

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.6329	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Unmitigated	4.6329	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.0948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9500e-003	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Total	**4.6329**	**6.8000e-004**	**0.0750**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**0.1608**	**0.1608**	**4.2000e-004**		**0.1714**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.0948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9500e-003	6.8000e-004	0.0750	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1608	0.1608	4.2000e-004		0.1714
Total	**4.6329**	**6.8000e-004**	**0.0750**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**0.1608**	**0.1608**	**4.2000e-004**		**0.1714**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Tractors/Loaders/Backhoes	1	4.00	365	200	0.37	CNG

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Tractors/Loaders/ Backhoes	0.1103	1.0361	0.7492	3.1700e-003		0.0376	0.0376		0.0346	0.0346	0.0000	306.5451	306.5451	0.0991		309.0237
Total	**0.1103**	**1.0361**	**0.7492**	**3.1700e-003**		**0.0376**	**0.0376**		**0.0346**	**0.0346**	**0.0000**	**306.5451**	**306.5451**	**0.0991**		**309.0237**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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APPENDIX 2.2:

EMFAC EMISSIONS SUMMARY

Emissions	Phase	Lb/Day	# Days	Emissions	Avg/Lb Day	Avg/Hourly
On-Site	Demolition	0.21	20	4.124	0.2062	0.025775
Exhaust PM-10	Site Preparation	2.16	10	21.564	2.1564	0.26955
	Grading	1.96	20	39.292	1.9646	0.245575
	Building Construction	1.20	200	239.12	1.1956	0.14945
	Architectural Coatings	0.09	20	1.888	0.0944	0.0118
	Paving	0.51	20	10.204	0.5102	0.063775
		6.13	250	316.192	1.264768	0.158096
Off-Site	Demolition	9.00E-03	20	0.18	0.009	0.001125
Exhaust PM-10	Site Preparation	2.62E-03	10	0.0262	0.00262	0.0003275
	Grading	1.46E-01	20	2.926	0.1463	0.0182875
	Building Construction	2.99E-02	200	5.98	0.0299	0.0037375
	Architectural Coatings	1.82E-03	20	0.0364	0.00182	0.0002275
	Paving	8.30E-04	20	0.0166	0.00083	0.00010375
		0.19047	250	9.1652	0.0366608	0.0045826

	Phase	Start Date	End Date	No. Days
	Demolition	7/1/2022	7/28/2022	20
	Site Preparation	7/29/2022	8/11/2022	10
	Grading	8/12/2022	9/8/2022	20
	Building Construction	9/9/2022	**6/15/2023**	200
	Paving	**5/19/2023**	**6/15/2023**	20
	Arch Coatings	**5/19/2023**	**6/15/2023**	20
			Total Days of Construction	**250**

AVERAGE EMISSION FACTOR
SAN BERNARDINO COUNTY 2023

Speed	LHD1	MHD	HHD
0	0.361749	0.03178	0.01337
5	0.029845	0.005333	0.01251
25	0.011019	0.002721	0.00658

Speed	Weighted Average Emissions
0	**0.07755**
5	**0.01412**
25	**0.00660**

Truck Emission Rates

Source	Trucks Per Day	VMT [a] (miles/day)	Truck Emission Rate [b] (grams/mile)	Truck Emission Rate [b] (grams/idle-hour)	Daily Truck Emissions [c] (grams/day)	Modeled Emission Rates (g/second)
On-Site Idling	23			0.0776	0.45	5.161E-06
On-Site Travel	46	10.96	0.0141		0.15	1.792E-06
Off-Site Travel Cedar Avenue 25% Inbound/Outbound	12	3.04	0.0066		0.02	2.319E-07
Off-Site Travel Cedar Avenue 45% Inbound/Outbound	21	2.04	0.0066		0.01	1.558E-07
Off-Site Travel Cedar Avenue 75% Inbound/Outbound	9	15.47	0.0066		0.10	1.181E-06
Off-Site Travel Durst Drive 80% Inbound/Outbound	37	4.06	0.0066		0.03	3.099E-07

[a] Vehicle miles traveled are for modeled truck route only.

[b] Emission rates determined using EMFAC 2017. Idle emission rates are expressed in grams per idle hour rather than grams per mile.

[c] This column includes the total truck travel and truck idle emissions. For idle emissions this column includes emissions based on the assumption that each truck idles for 15 minutes.

calendar_y	season_mo	sub_area	vehicle_class	fuel	temperatu	relative_hu	process	speed_tim	pollutant	emission_rate
2023	Annual	San Bernar	HHDT	Dsl	60	70	RUNEX	5	PM10	0.013487
2023	Annual	San Bernar	HHDT	Dsl	60	70	RUNEX	25	PM10	0.0071
2023	Annual	San Bernar	LHDT1	Dsl	60	70	RUNEX	5	PM10	0.065062
2023	Annual	San Bernar	LHDT1	Dsl	60	70	RUNEX	25	PM10	0.024021
2023	Annual	San Bernar	MHDT	Dsl	60	70	RUNEX	5	PM10	0.005867
2023	Annual	San Bernar	MHDT	Dsl	60	70	RUNEX	25	PM10	0.002993
2023	Annual	San Bernar	HHDT	Dsl			IDLEX		PM10	0.014413
2023	Annual	San Bernar	LHDT1	Dsl			IDLEX		PM10	0.788606
2023	Annual	San Bernar	MHDT	Dsl			IDLEX		PM10	0.03496

Source: EMFAC2017 (v1.0.3) Emissions Inventory
Region Type: County
Region: RIVERSIDE COUNTY
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	Population
San Berna	2023	HHDT	Aggregate	Aggregate	Gasoline	5.400593
San Berna	2023	HHDT	Aggregate	Aggregate	Diesel	15095.86
San Berna	2023	HHDT	Aggregate	Aggregate	Natural Ga	1175.155
San Berna	2023	LHDT1	Aggregate	Aggregate	Gasoline	14140.98
San Berna	2023	LHDT1	Aggregate	Aggregate	Diesel	11984.04
San Berna	2023	MHDT	Aggregate	Aggregate	Gasoline	1442.205
San Berna	2023	MHDT	Aggregate	Aggregate	Diesel	14412.49

HHDT% GAS/NG	0.07253
HHDT% DSL	0.92747
LHDT1% GAS	0.54128
LHDT1% DSL	0.45872
MHDT% GAS	0.09096
MHDT% DSL	0.90904

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APPENDIX 2.3:

AERMOD MODEL INPUT/OUTPUT

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 10.2.1
** Lakes Environmental Software Inc.
** Date: 1/4/2022
** File: C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst Rialto\14014 Construction\14014
Construction.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst Rialto\14014 Ops\14
   MODELOPT DFAULT CONC
   AVERTIME ANNUAL
   URBANOPT 2035210
   POLLUTID DPM
   FLAGPOLE 0.00
   RUNORNOT RUN
   ERRORFIL "14014 Construction.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     463534.948  3772780.029      373.820
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 0.0005773979
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 5
** 463422.820, 3772877.956, 376.00, 3.49, 6.51
** 463419.479, 3771027.071, 347.95, 3.49, 6.51
** 463418.644, 3770288.721, 338.00, 3.49, 6.51
** 463449.965, 3770044.832, 335.00, 3.49, 6.51
** 463452.889, 3769814.306, 338.05, 3.49, 6.51
** ----------------------------------------------------------------------
   LOCATION L0000001     VOLUME   463422.808 3772870.956 375.98
   LOCATION L0000002     VOLUME   463422.782 3772856.956 375.93
   LOCATION L0000003     VOLUME   463422.757 3772842.956 375.80
   LOCATION L0000004     VOLUME   463422.732 3772828.956 375.38
   LOCATION L0000005     VOLUME   463422.707 3772814.956 375.00
   LOCATION L0000006     VOLUME   463422.681 3772800.956 374.95
   LOCATION L0000007     VOLUME   463422.656 3772786.956 374.90
   LOCATION L0000008     VOLUME   463422.631 3772772.956 374.50
   LOCATION L0000009     VOLUME   463422.605 3772758.956 374.08
   LOCATION L0000010     VOLUME   463422.580 3772744.956 374.00
   LOCATION L0000011     VOLUME   463422.555 3772730.956 374.00
```

LOCATION L0000012 VOLUME 463422.530 3772716.956 373.69
LOCATION L0000013 VOLUME 463422.504 3772702.956 373.22
LOCATION L0000014 VOLUME 463422.479 3772688.956 373.00
LOCATION L0000015 VOLUME 463422.454 3772674.956 373.00
LOCATION L0000016 VOLUME 463422.429 3772660.956 372.82
LOCATION L0000017 VOLUME 463422.403 3772646.956 372.35
LOCATION L0000018 VOLUME 463422.378 3772632.956 372.00
LOCATION L0000019 VOLUME 463422.353 3772618.956 372.00
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LOCATION L0000021 VOLUME 463422.302 3772590.956 371.53
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LOCATION L0000176 VOLUME 463418.794 3770420.959 340.00
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LOCATION L0000186 VOLUME 463419.633 3770281.022 338.00
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LOCATION L0000189 VOLUME 463424.983 3770239.365 337.08
LOCATION L0000190 VOLUME 463426.766 3770225.479 336.91
LOCATION L0000191 VOLUME 463428.549 3770211.593 336.76
LOCATION L0000192 VOLUME 463430.333 3770197.707 336.46
LOCATION L0000193 VOLUME 463432.116 3770183.821 336.15
LOCATION L0000194 VOLUME 463433.899 3770169.935 336.00
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LOCATION L0000196 VOLUME 463437.466 3770142.163 335.92
LOCATION L0000197 VOLUME 463439.249 3770128.277 335.61
LOCATION L0000198 VOLUME 463441.032 3770114.391 335.27
LOCATION L0000199 VOLUME 463442.816 3770100.505 335.11
LOCATION L0000200 VOLUME 463444.599 3770086.619 335.00
LOCATION L0000201 VOLUME 463446.382 3770072.733 335.00
LOCATION L0000202 VOLUME 463448.166 3770058.847 335.00
LOCATION L0000203 VOLUME 463449.949 3770044.961 335.00
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LOCATION L0000207 VOLUME 463450.674 3769988.967 335.00
LOCATION L0000208 VOLUME 463450.851 3769974.968 335.00
LOCATION L0000209 VOLUME 463451.029 3769960.969 335.00

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   LOCATION L0000210     VOLUME   463451.206 3769946.970 335.00
   LOCATION L0000211     VOLUME   463451.384 3769932.971 335.00
   LOCATION L0000212     VOLUME   463451.561 3769918.972 335.00
   LOCATION L0000213     VOLUME   463451.739 3769904.973 335.00
   LOCATION L0000214     VOLUME   463451.917 3769890.975 335.00
   LOCATION L0000215     VOLUME   463452.094 3769876.976 335.00
   LOCATION L0000216     VOLUME   463452.272 3769862.977 335.00
   LOCATION L0000217     VOLUME   463452.449 3769848.978 335.00
   LOCATION L0000218     VOLUME   463452.627 3769834.979 336.10
   LOCATION L0000219     VOLUME   463452.804 3769820.980 337.45
** End of LINE VOLUME Source ID = SLINE1
** Source Parameters **
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** LINE VOLUME Source ID = SLINE1
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   SRCPARAM L0000002     0.000002637      3.49      6.51      3.25
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   SRCPARAM L0000004     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000005     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000006     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000007     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000008     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000009     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000010     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000011     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000012     0.000002637      3.49      6.51      3.25
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   SRCPARAM L0000040     0.000002637      3.49      6.51      3.25
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   SRCPARAM L0000046     0.000002637      3.49      6.51      3.25
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   SRCPARAM L0000048     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000049     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000050     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000051     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000052     0.000002637      3.49      6.51      3.25
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SRCPARAM L0000055     0.000002637      3.49      6.51      3.25
SRCPARAM L0000056     0.000002637      3.49      6.51      3.25
SRCPARAM L0000057     0.000002637      3.49      6.51      3.25
SRCPARAM L0000058     0.000002637      3.49      6.51      3.25
SRCPARAM L0000059     0.000002637      3.49      6.51      3.25
SRCPARAM L0000060     0.000002637      3.49      6.51      3.25
SRCPARAM L0000061     0.000002637      3.49      6.51      3.25
SRCPARAM L0000062     0.000002637      3.49      6.51      3.25
SRCPARAM L0000063     0.000002637      3.49      6.51      3.25
SRCPARAM L0000064     0.000002637      3.49      6.51      3.25
SRCPARAM L0000065     0.000002637      3.49      6.51      3.25
SRCPARAM L0000066     0.000002637      3.49      6.51      3.25
SRCPARAM L0000067     0.000002637      3.49      6.51      3.25
SRCPARAM L0000068     0.000002637      3.49      6.51      3.25
SRCPARAM L0000069     0.000002637      3.49      6.51      3.25
SRCPARAM L0000070     0.000002637      3.49      6.51      3.25
SRCPARAM L0000071     0.000002637      3.49      6.51      3.25
SRCPARAM L0000072     0.000002637      3.49      6.51      3.25
SRCPARAM L0000073     0.000002637      3.49      6.51      3.25
SRCPARAM L0000074     0.000002637      3.49      6.51      3.25
SRCPARAM L0000075     0.000002637      3.49      6.51      3.25
SRCPARAM L0000076     0.000002637      3.49      6.51      3.25
SRCPARAM L0000077     0.000002637      3.49      6.51      3.25
SRCPARAM L0000078     0.000002637      3.49      6.51      3.25
SRCPARAM L0000079     0.000002637      3.49      6.51      3.25
SRCPARAM L0000080     0.000002637      3.49      6.51      3.25
SRCPARAM L0000081     0.000002637      3.49      6.51      3.25
SRCPARAM L0000082     0.000002637      3.49      6.51      3.25
SRCPARAM L0000083     0.000002637      3.49      6.51      3.25
SRCPARAM L0000084     0.000002637      3.49      6.51      3.25
SRCPARAM L0000085     0.000002637      3.49      6.51      3.25
SRCPARAM L0000086     0.000002637      3.49      6.51      3.25
SRCPARAM L0000087     0.000002637      3.49      6.51      3.25
SRCPARAM L0000088     0.000002637      3.49      6.51      3.25
SRCPARAM L0000089     0.000002637      3.49      6.51      3.25
SRCPARAM L0000090     0.000002637      3.49      6.51      3.25
SRCPARAM L0000091     0.000002637      3.49      6.51      3.25
SRCPARAM L0000092     0.000002637      3.49      6.51      3.25
SRCPARAM L0000093     0.000002637      3.49      6.51      3.25
SRCPARAM L0000094     0.000002637      3.49      6.51      3.25
SRCPARAM L0000095     0.000002637      3.49      6.51      3.25
SRCPARAM L0000096     0.000002637      3.49      6.51      3.25
SRCPARAM L0000097     0.000002637      3.49      6.51      3.25
SRCPARAM L0000098     0.000002637      3.49      6.51      3.25
SRCPARAM L0000099     0.000002637      3.49      6.51      3.25
SRCPARAM L0000100     0.000002637      3.49      6.51      3.25
SRCPARAM L0000101     0.000002637      3.49      6.51      3.25
SRCPARAM L0000102     0.000002637      3.49      6.51      3.25
SRCPARAM L0000103     0.000002637      3.49      6.51      3.25
SRCPARAM L0000104     0.000002637      3.49      6.51      3.25
SRCPARAM L0000105     0.000002637      3.49      6.51      3.25
SRCPARAM L0000106     0.000002637      3.49      6.51      3.25
SRCPARAM L0000107     0.000002637      3.49      6.51      3.25
SRCPARAM L0000108     0.000002637      3.49      6.51      3.25
SRCPARAM L0000109     0.000002637      3.49      6.51      3.25
SRCPARAM L0000110     0.000002637      3.49      6.51      3.25
SRCPARAM L0000111     0.000002637      3.49      6.51      3.25
SRCPARAM L0000112     0.000002637      3.49      6.51      3.25
SRCPARAM L0000113     0.000002637      3.49      6.51      3.25
SRCPARAM L0000114     0.000002637      3.49      6.51      3.25
SRCPARAM L0000115     0.000002637      3.49      6.51      3.25
SRCPARAM L0000116     0.000002637      3.49      6.51      3.25
SRCPARAM L0000117     0.000002637      3.49      6.51      3.25
SRCPARAM L0000118     0.000002637      3.49      6.51      3.25
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SRCPARAM L0000119     0.000002637      3.49      6.51      3.25
SRCPARAM L0000120     0.000002637      3.49      6.51      3.25
SRCPARAM L0000121     0.000002637      3.49      6.51      3.25
SRCPARAM L0000122     0.000002637      3.49      6.51      3.25
SRCPARAM L0000123     0.000002637      3.49      6.51      3.25
SRCPARAM L0000124     0.000002637      3.49      6.51      3.25
SRCPARAM L0000125     0.000002637      3.49      6.51      3.25
SRCPARAM L0000126     0.000002637      3.49      6.51      3.25
SRCPARAM L0000127     0.000002637      3.49      6.51      3.25
SRCPARAM L0000128     0.000002637      3.49      6.51      3.25
SRCPARAM L0000129     0.000002637      3.49      6.51      3.25
SRCPARAM L0000130     0.000002637      3.49      6.51      3.25
SRCPARAM L0000131     0.000002637      3.49      6.51      3.25
SRCPARAM L0000132     0.000002637      3.49      6.51      3.25
SRCPARAM L0000133     0.000002637      3.49      6.51      3.25
SRCPARAM L0000134     0.000002637      3.49      6.51      3.25
SRCPARAM L0000135     0.000002637      3.49      6.51      3.25
SRCPARAM L0000136     0.000002637      3.49      6.51      3.25
SRCPARAM L0000137     0.000002637      3.49      6.51      3.25
SRCPARAM L0000138     0.000002637      3.49      6.51      3.25
SRCPARAM L0000139     0.000002637      3.49      6.51      3.25
SRCPARAM L0000140     0.000002637      3.49      6.51      3.25
SRCPARAM L0000141     0.000002637      3.49      6.51      3.25
SRCPARAM L0000142     0.000002637      3.49      6.51      3.25
SRCPARAM L0000143     0.000002637      3.49      6.51      3.25
SRCPARAM L0000144     0.000002637      3.49      6.51      3.25
SRCPARAM L0000145     0.000002637      3.49      6.51      3.25
SRCPARAM L0000146     0.000002637      3.49      6.51      3.25
SRCPARAM L0000147     0.000002637      3.49      6.51      3.25
SRCPARAM L0000148     0.000002637      3.49      6.51      3.25
SRCPARAM L0000149     0.000002637      3.49      6.51      3.25
SRCPARAM L0000150     0.000002637      3.49      6.51      3.25
SRCPARAM L0000151     0.000002637      3.49      6.51      3.25
SRCPARAM L0000152     0.000002637      3.49      6.51      3.25
SRCPARAM L0000153     0.000002637      3.49      6.51      3.25
SRCPARAM L0000154     0.000002637      3.49      6.51      3.25
SRCPARAM L0000155     0.000002637      3.49      6.51      3.25
SRCPARAM L0000156     0.000002637      3.49      6.51      3.25
SRCPARAM L0000157     0.000002637      3.49      6.51      3.25
SRCPARAM L0000158     0.000002637      3.49      6.51      3.25
SRCPARAM L0000159     0.000002637      3.49      6.51      3.25
SRCPARAM L0000160     0.000002637      3.49      6.51      3.25
SRCPARAM L0000161     0.000002637      3.49      6.51      3.25
SRCPARAM L0000162     0.000002637      3.49      6.51      3.25
SRCPARAM L0000163     0.000002637      3.49      6.51      3.25
SRCPARAM L0000164     0.000002637      3.49      6.51      3.25
SRCPARAM L0000165     0.000002637      3.49      6.51      3.25
SRCPARAM L0000166     0.000002637      3.49      6.51      3.25
SRCPARAM L0000167     0.000002637      3.49      6.51      3.25
SRCPARAM L0000168     0.000002637      3.49      6.51      3.25
SRCPARAM L0000169     0.000002637      3.49      6.51      3.25
SRCPARAM L0000170     0.000002637      3.49      6.51      3.25
SRCPARAM L0000171     0.000002637      3.49      6.51      3.25
SRCPARAM L0000172     0.000002637      3.49      6.51      3.25
SRCPARAM L0000173     0.000002637      3.49      6.51      3.25
SRCPARAM L0000174     0.000002637      3.49      6.51      3.25
SRCPARAM L0000175     0.000002637      3.49      6.51      3.25
SRCPARAM L0000176     0.000002637      3.49      6.51      3.25
SRCPARAM L0000177     0.000002637      3.49      6.51      3.25
SRCPARAM L0000178     0.000002637      3.49      6.51      3.25
SRCPARAM L0000179     0.000002637      3.49      6.51      3.25
SRCPARAM L0000180     0.000002637      3.49      6.51      3.25
SRCPARAM L0000181     0.000002637      3.49      6.51      3.25
SRCPARAM L0000182     0.000002637      3.49      6.51      3.25
SRCPARAM L0000183     0.000002637      3.49      6.51      3.25
SRCPARAM L0000184     0.000002637      3.49      6.51      3.25
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   SRCPARAM L0000185     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000186     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000187     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000188     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000189     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000190     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000191     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000192     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000193     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000194     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000195     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000196     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000197     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000198     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000199     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000200     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000201     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000202     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000203     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000204     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000205     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000206     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000207     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000208     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000209     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000210     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000211     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000212     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000213     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000214     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000215     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000216     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000217     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000218     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000219     0.000002637      3.49      6.51      3.25
** --------------------------------------------------------------------
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000001     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000001     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000002     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
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EMISFACT L0000003     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000004     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000004     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000005     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000005     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000006     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000006     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000007     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000007     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000008     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000008     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000009     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000009     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000010     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000011     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000011     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000012     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000012     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000013     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000013     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000014     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000014     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000015     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000015     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000016     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000016     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000017     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000017     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000018     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000018     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000019     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000019     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000020     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000020     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000021     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000021     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000022     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000022     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000023     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000023     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000024     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000024     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000025     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000025     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000026     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000026     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   SRCGROUP ALL
SO FINISHED
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** AERMOD Receptor Pathway
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**
**
RE STARTING
   INCLUDED "14014 Construction.rou"
RE FINISHED
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** AERMOD Meteorology Pathway
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ME STARTING
   SURFFILE FONT_V9_ADJU\FONT_v9.SFC
   PROFFILE FONT_V9_ADJU\FONT_v9.PFL
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   SURFDATA 3102 2011
   UAIRDATA 3190 2011
   SITEDATA 99999 2011
   PROFBASE 367.0 METERS
ME FINISHED
**
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** AERMOD Output Pathway
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**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL "14014 CONSTRUCTION.AD\AN00GALL.PLT" 31
   SUMMFILE "14014 Construction.sum"
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    World Geodetic System 1984
** DTMRGN   Global Definition
** UNITS    m
** ZONE     11
** ZONEINX  0
**
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**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 10.2.1
** Lakes Environmental Software Inc.
** Date: 1/4/2022
** File: C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst Rialto\14014 Construction\14014
Construction.ADI
**
**************************************
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**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst Rialto\14014 Ops\14
   MODELOPT DFAULT CONC
   AVERTIME ANNUAL
   URBANOPT 2035210
   POLLUTID DPM
   FLAGPOLE 0.00
   RUNORNOT RUN
   ERRORFIL "14014 Construction.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     463534.948  3772780.029      373.820
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 0.0005773979
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 5
** 463422.820, 3772877.956, 376.00, 3.49, 6.51
** 463419.479, 3771027.071, 347.95, 3.49, 6.51
** 463418.644, 3770288.721, 338.00, 3.49, 6.51
** 463449.965, 3770044.832, 335.00, 3.49, 6.51
** 463452.889, 3769814.306, 338.05, 3.49, 6.51
** ----------------------------------------------------------------------
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   LOCATION L0000002     VOLUME   463422.782 3772856.956 375.93
   LOCATION L0000003     VOLUME   463422.757 3772842.956 375.80
   LOCATION L0000004     VOLUME   463422.732 3772828.956 375.38
   LOCATION L0000005     VOLUME   463422.707 3772814.956 375.00
   LOCATION L0000006     VOLUME   463422.681 3772800.956 374.95
   LOCATION L0000007     VOLUME   463422.656 3772786.956 374.90
   LOCATION L0000008     VOLUME   463422.631 3772772.956 374.50
   LOCATION L0000009     VOLUME   463422.605 3772758.956 374.08
   LOCATION L0000010     VOLUME   463422.580 3772744.956 374.00
   LOCATION L0000011     VOLUME   463422.555 3772730.956 374.00
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LOCATION L0000012 VOLUME 463422.530 3772716.956 373.69
LOCATION L0000013 VOLUME 463422.504 3772702.956 373.22
LOCATION L0000014 VOLUME 463422.479 3772688.956 373.00
LOCATION L0000015 VOLUME 463422.454 3772674.956 373.00
LOCATION L0000016 VOLUME 463422.429 3772660.956 372.82
LOCATION L0000017 VOLUME 463422.403 3772646.956 372.35
LOCATION L0000018 VOLUME 463422.378 3772632.956 372.00
LOCATION L0000019 VOLUME 463422.353 3772618.956 372.00
LOCATION L0000020 VOLUME 463422.327 3772604.956 371.96
LOCATION L0000021 VOLUME 463422.302 3772590.956 371.53
LOCATION L0000022 VOLUME 463422.277 3772576.956 371.11
LOCATION L0000023 VOLUME 463422.252 3772562.956 371.05
LOCATION L0000024 VOLUME 463422.226 3772548.956 371.01
LOCATION L0000025 VOLUME 463422.201 3772534.956 371.00
LOCATION L0000026 VOLUME 463422.176 3772520.956 371.00
LOCATION L0000027 VOLUME 463422.151 3772506.956 370.69
LOCATION L0000028 VOLUME 463422.125 3772492.956 370.22
LOCATION L0000029 VOLUME 463422.100 3772478.956 369.98
LOCATION L0000030 VOLUME 463422.075 3772464.956 369.94
LOCATION L0000031 VOLUME 463422.049 3772450.956 369.76
LOCATION L0000032 VOLUME 463422.024 3772436.956 369.33
LOCATION L0000033 VOLUME 463421.999 3772422.956 368.89
LOCATION L0000034 VOLUME 463421.974 3772408.956 368.42
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LOCATION L0000036 VOLUME 463421.923 3772380.957 368.00
LOCATION L0000037 VOLUME 463421.898 3772366.957 368.00
LOCATION L0000038 VOLUME 463421.873 3772352.957 367.55
LOCATION L0000039 VOLUME 463421.847 3772338.957 367.09
LOCATION L0000040 VOLUME 463421.822 3772324.957 367.00
LOCATION L0000041 VOLUME 463421.797 3772310.957 367.00
LOCATION L0000042 VOLUME 463421.772 3772296.957 366.69
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LOCATION L0000046 VOLUME 463421.670 3772240.957 365.82
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LOCATION L0000052 VOLUME 463421.519 3772156.957 364.94
LOCATION L0000053 VOLUME 463421.494 3772142.957 364.52
LOCATION L0000054 VOLUME 463421.468 3772128.957 364.08
LOCATION L0000055 VOLUME 463421.443 3772114.957 364.00
LOCATION L0000056 VOLUME 463421.418 3772100.957 364.00
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LOCATION L0000060 VOLUME 463421.317 3772044.957 363.00
LOCATION L0000061 VOLUME 463421.291 3772030.957 362.82
LOCATION L0000062 VOLUME 463421.266 3772016.957 362.35
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SRCPARAM L0000158     0.000002637      3.49      6.51      3.25
SRCPARAM L0000159     0.000002637      3.49      6.51      3.25
SRCPARAM L0000160     0.000002637      3.49      6.51      3.25
SRCPARAM L0000161     0.000002637      3.49      6.51      3.25
SRCPARAM L0000162     0.000002637      3.49      6.51      3.25
SRCPARAM L0000163     0.000002637      3.49      6.51      3.25
SRCPARAM L0000164     0.000002637      3.49      6.51      3.25
SRCPARAM L0000165     0.000002637      3.49      6.51      3.25
SRCPARAM L0000166     0.000002637      3.49      6.51      3.25
SRCPARAM L0000167     0.000002637      3.49      6.51      3.25
SRCPARAM L0000168     0.000002637      3.49      6.51      3.25
SRCPARAM L0000169     0.000002637      3.49      6.51      3.25
SRCPARAM L0000170     0.000002637      3.49      6.51      3.25
SRCPARAM L0000171     0.000002637      3.49      6.51      3.25
SRCPARAM L0000172     0.000002637      3.49      6.51      3.25
SRCPARAM L0000173     0.000002637      3.49      6.51      3.25
SRCPARAM L0000174     0.000002637      3.49      6.51      3.25
SRCPARAM L0000175     0.000002637      3.49      6.51      3.25
SRCPARAM L0000176     0.000002637      3.49      6.51      3.25
SRCPARAM L0000177     0.000002637      3.49      6.51      3.25
SRCPARAM L0000178     0.000002637      3.49      6.51      3.25
SRCPARAM L0000179     0.000002637      3.49      6.51      3.25
SRCPARAM L0000180     0.000002637      3.49      6.51      3.25
SRCPARAM L0000181     0.000002637      3.49      6.51      3.25
SRCPARAM L0000182     0.000002637      3.49      6.51      3.25
SRCPARAM L0000183     0.000002637      3.49      6.51      3.25
SRCPARAM L0000184     0.000002637      3.49      6.51      3.25
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   SRCPARAM L0000185     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000186     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000187     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000188     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000189     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000190     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000191     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000192     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000193     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000194     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000195     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000196     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000197     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000198     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000199     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000200     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000201     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000202     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000203     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000204     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000205     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000206     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000207     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000208     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000209     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000210     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000211     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000212     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000213     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000214     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000215     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000216     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000217     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000218     0.000002637      3.49      6.51      3.25
   SRCPARAM L0000219     0.000002637      3.49      6.51      3.25
** --------------------------------------------------------------------
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000001     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000001     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000002     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
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EMISFACT L0000003     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000004     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000004     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000005     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000005     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000006     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000006     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000007     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000007     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000008     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000008     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000009     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000009     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000010     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000011     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000011     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000012     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000012     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000013     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000013     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000014     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000014     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000015     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000015     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000016     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000016     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000017     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000017     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000018     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000018     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000019     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000019     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000020     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000020     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000021     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000021     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000022     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000022     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000023     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000023     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000024     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000024     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0000025     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0000026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000026     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0000027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000027     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
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EMISFACT L0000029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000029     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000029     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000030     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000030     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000031     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000032     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0000033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000033     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0000034     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0000035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000036     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
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EMISFACT L0000036     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000039     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0000040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000041     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
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EMISFACT L0000042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000042     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000043     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000043     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000044     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000044     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000045     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000045     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000047     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000047     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED "14014 Construction.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE FONT_V9_ADJU\FONT_v9.SFC
   PROFFILE FONT_V9_ADJU\FONT_v9.PFL
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   SURFDATA 3102 2011
   UAIRDATA 3190 2011
   SITEDATA 99999 2011
   PROFBASE 367.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL "14014 CONSTRUCTION.AD\AN00GALL.PLT" 31
   SUMMFILE "14014 Construction.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
                ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    3172       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187    3172       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

                      PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                                            ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for   220 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   2035210.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
```

```
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. Urban Roughness Length of 1.0 Meter Assumed.

 **Other Options Specified:
        ADJ_U*   - Use ADJ_U* option for SBL in AERMET
        TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Accepts FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  DPM

 **Model Calculates ANNUAL Averages Only

 **This Run Includes:    220 Source(s);       1 Source Group(s); and      95 Receptor(s)

               with:      0 POINT(s), including
                          0 POINTCAP(s) and      0 POINTHOR(s)
                and:    220 VOLUME source(s)
                and:      0 AREA type source(s)
                and:      0 LINE source(s)
                and:      0 RLINE/RLINEXT source(s)
                and:      0 OPENPIT source(s)
                and:      0 BUOYANT LINE source(s) with a total of     0 line(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  16216

 **Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing
                                                                 Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   367.00 ;  Decay Coef. =
 0.000     ;  Rot. Angle =     0.0
                Emission Units = GRAMS/SEC                                ;  Emission Rate
                Unit Factor =   0.10000E+07
                Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.7 MB of RAM.

 **Input Runstream File:
 aermod.inp
 **Output Print File:
 aermod.out

 **Detailed Error/Message File:   14014
 Construction.err
 **File for Summary of Results:   14014
 Construction.sum
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                  ***       11:10:30

                      PAGE   2
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
```

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER URBAN SOURCE PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	SCALAR VARY BY
VOL1	0	0.19920E-01	463534.9	3772780.0	373.8	5.00	45.55	1.40	YES HRDOW
L0000001	0	0.26370E-05	463422.8	3772871.0	376.0	3.49	6.51	3.25	YES HRDOW
L0000002	0	0.26370E-05	463422.8	3772857.0	375.9	3.49	6.51	3.25	YES HRDOW
L0000003	0	0.26370E-05	463422.8	3772843.0	375.8	3.49	6.51	3.25	YES HRDOW
L0000004	0	0.26370E-05	463422.7	3772829.0	375.4	3.49	6.51	3.25	YES HRDOW
L0000005	0	0.26370E-05	463422.7	3772815.0	375.0	3.49	6.51	3.25	YES HRDOW
L0000006	0	0.26370E-05	463422.7	3772801.0	374.9	3.49	6.51	3.25	YES HRDOW
L0000007	0	0.26370E-05	463422.7	3772787.0	374.9	3.49	6.51	3.25	YES HRDOW
L0000008	0	0.26370E-05	463422.6	3772773.0	374.5	3.49	6.51	3.25	YES HRDOW
L0000009	0	0.26370E-05	463422.6	3772759.0	374.1	3.49	6.51	3.25	YES HRDOW
L0000010	0	0.26370E-05	463422.6	3772745.0	374.0	3.49	6.51	3.25	YES HRDOW
L0000011	0	0.26370E-05	463422.6	3772731.0	374.0	3.49	6.51	3.25	YES HRDOW
L0000012	0	0.26370E-05	463422.5	3772717.0	373.7	3.49	6.51	3.25	YES HRDOW
L0000013	0	0.26370E-05	463422.5	3772703.0	373.2	3.49	6.51	3.25	YES HRDOW
L0000014	0	0.26370E-05	463422.5	3772689.0	373.0	3.49	6.51	3.25	YES HRDOW
L0000015	0	0.26370E-05	463422.5	3772675.0	373.0	3.49	6.51	3.25	YES HRDOW
L0000016	0	0.26370E-05	463422.4	3772661.0	372.8	3.49	6.51	3.25	YES HRDOW
L0000017	0	0.26370E-05	463422.4	3772647.0	372.4	3.49	6.51	3.25	YES HRDOW
L0000018	0	0.26370E-05	463422.4	3772633.0	372.0	3.49	6.51	3.25	YES HRDOW
L0000019	0	0.26370E-05	463422.4	3772619.0	372.0	3.49	6.51	3.25	YES HRDOW
L0000020	0	0.26370E-05	463422.3	3772605.0	372.0	3.49	6.51	3.25	YES HRDOW
L0000021	0	0.26370E-05	463422.3	3772591.0	371.5	3.49	6.51	3.25	YES HRDOW
L0000022	0	0.26370E-05	463422.3	3772577.0	371.1	3.49	6.51	3.25	YES HRDOW
L0000023	0	0.26370E-05	463422.3	3772563.0	371.1	3.49	6.51	3.25	YES HRDOW
L0000024	0	0.26370E-05	463422.2	3772549.0	371.0	3.49	6.51	3.25	YES HRDOW
L0000025	0	0.26370E-05	463422.2	3772535.0	371.0	3.49	6.51	3.25	YES HRDOW
L0000026	0	0.26370E-05	463422.2	3772521.0	371.0	3.49	6.51	3.25	YES HRDOW

L0000027 0 0.26370E-05 463422.2 3772507.0 370.7 3.49 6.51 3.25
YES HRDOW
L0000028 0 0.26370E-05 463422.1 3772493.0 370.2 3.49 6.51 3.25
YES HRDOW
L0000029 0 0.26370E-05 463422.1 3772479.0 370.0 3.49 6.51 3.25
YES HRDOW
L0000030 0 0.26370E-05 463422.1 3772465.0 369.9 3.49 6.51 3.25
YES HRDOW
L0000031 0 0.26370E-05 463422.0 3772451.0 369.8 3.49 6.51 3.25
YES HRDOW
L0000032 0 0.26370E-05 463422.0 3772437.0 369.3 3.49 6.51 3.25
YES HRDOW
L0000033 0 0.26370E-05 463422.0 3772423.0 368.9 3.49 6.51 3.25
YES HRDOW
L0000034 0 0.26370E-05 463422.0 3772409.0 368.4 3.49 6.51 3.25
YES HRDOW
L0000035 0 0.26370E-05 463421.9 3772395.0 368.0 3.49 6.51 3.25
YES HRDOW
L0000036 0 0.26370E-05 463421.9 3772381.0 368.0 3.49 6.51 3.25
YES HRDOW
L0000037 0 0.26370E-05 463421.9 3772367.0 368.0 3.49 6.51 3.25
YES HRDOW
L0000038 0 0.26370E-05 463421.9 3772353.0 367.6 3.49 6.51 3.25
YES HRDOW
L0000039 0 0.26370E-05 463421.8 3772339.0 367.1 3.49 6.51 3.25
YES HRDOW

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER URBAN SOURCE PART.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	EMISSION RATE SCALAR VARY BY
L0000040	0	0.26370E-05	463421.8	3772325.0	367.0	3.49	6.51	3.25	YES HRDOW
L0000041	0	0.26370E-05	463421.8	3772311.0	367.0	3.49	6.51	3.25	YES HRDOW
L0000042	0	0.26370E-05	463421.8	3772297.0	366.7	3.49	6.51	3.25	YES HRDOW
L0000043	0	0.26370E-05	463421.7	3772283.0	366.2	3.49	6.51	3.25	YES HRDOW
L0000044	0	0.26370E-05	463421.7	3772269.0	366.0	3.49	6.51	3.25	YES HRDOW
L0000045	0	0.26370E-05	463421.7	3772255.0	366.0	3.49	6.51	3.25	YES HRDOW
L0000046	0	0.26370E-05	463421.7	3772241.0	365.8	3.49	6.51	3.25	YES HRDOW
L0000047	0	0.26370E-05	463421.6	3772227.0	365.4	3.49	6.51	3.25	YES HRDOW
L0000048	0	0.26370E-05	463421.6	3772213.0	365.0	3.49	6.51	3.25	YES HRDOW
L0000049	0	0.26370E-05	463421.6	3772199.0	365.0	3.49	6.51	3.25	YES HRDOW

L0000050	0	0.26370E-05	463421.6	3772185.0	365.0	3.49	6.51	3.25	
YES	HRDOW								
L0000051	0	0.26370E-05	463421.5	3772171.0	365.0	3.49	6.51	3.25	
YES	HRDOW								
L0000052	0	0.26370E-05	463421.5	3772157.0	364.9	3.49	6.51	3.25	
YES	HRDOW								
L0000053	0	0.26370E-05	463421.5	3772143.0	364.5	3.49	6.51	3.25	
YES	HRDOW								
L0000054	0	0.26370E-05	463421.5	3772129.0	364.1	3.49	6.51	3.25	
YES	HRDOW								
L0000055	0	0.26370E-05	463421.4	3772115.0	364.0	3.49	6.51	3.25	
YES	HRDOW								
L0000056	0	0.26370E-05	463421.4	3772101.0	364.0	3.49	6.51	3.25	
YES	HRDOW								
L0000057	0	0.26370E-05	463421.4	3772087.0	363.7	3.49	6.51	3.25	
YES	HRDOW								
L0000058	0	0.26370E-05	463421.4	3772073.0	363.2	3.49	6.51	3.25	
YES	HRDOW								
L0000059	0	0.26370E-05	463421.3	3772059.0	363.0	3.49	6.51	3.25	
YES	HRDOW								
L0000060	0	0.26370E-05	463421.3	3772045.0	363.0	3.49	6.51	3.25	
YES	HRDOW								
L0000061	0	0.26370E-05	463421.3	3772031.0	362.8	3.49	6.51	3.25	
YES	HRDOW								
L0000062	0	0.26370E-05	463421.3	3772017.0	362.4	3.49	6.51	3.25	
YES	HRDOW								
L0000063	0	0.26370E-05	463421.2	3772003.0	362.0	3.49	6.51	3.25	
YES	HRDOW								
L0000064	0	0.26370E-05	463421.2	3771989.0	362.0	3.49	6.51	3.25	
YES	HRDOW								
L0000065	0	0.26370E-05	463421.2	3771975.0	362.0	3.49	6.51	3.25	
YES	HRDOW								
L0000066	0	0.26370E-05	463421.2	3771961.0	362.0	3.49	6.51	3.25	
YES	HRDOW								
L0000067	0	0.26370E-05	463421.1	3771947.0	361.9	3.49	6.51	3.25	
YES	HRDOW								
L0000068	0	0.26370E-05	463421.1	3771933.0	361.5	3.49	6.51	3.25	
YES	HRDOW								
L0000069	0	0.26370E-05	463421.1	3771919.0	361.1	3.49	6.51	3.25	
YES	HRDOW								
L0000070	0	0.26370E-05	463421.1	3771905.0	361.0	3.49	6.51	3.25	
YES	HRDOW								
L0000071	0	0.26370E-05	463421.0	3771891.0	361.0	3.49	6.51	3.25	
YES	HRDOW								
L0000072	0	0.26370E-05	463421.0	3771877.0	360.7	3.49	6.51	3.25	
YES	HRDOW								
L0000073	0	0.26370E-05	463421.0	3771863.0	360.2	3.49	6.51	3.25	
YES	HRDOW								
L0000074	0	0.26370E-05	463421.0	3771849.0	360.0	3.49	6.51	3.25	
YES	HRDOW								
L0000075	0	0.26370E-05	463420.9	3771835.0	360.0	3.49	6.51	3.25	
YES	HRDOW								
L0000076	0	0.26370E-05	463420.9	3771821.0	359.8	3.49	6.51	3.25	
YES	HRDOW								
L0000077	0	0.26370E-05	463420.9	3771807.0	359.4	3.49	6.51	3.25	
YES	HRDOW								
L0000078	0	0.26370E-05	463420.9	3771793.0	359.0	3.49	6.51	3.25	
YES	HRDOW								
L0000079	0	0.26370E-05	463420.8	3771779.0	359.0	3.49	6.51	3.25	
YES	HRDOW								

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER URBAN SOURCE PART.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	SCALAR VARY BY
L0000080	0	0.26370E-05	463420.8	3771765.0	358.9	3.49	6.51	3.25	YES HRDOW
L0000081	0	0.26370E-05	463420.8	3771751.0	358.5	3.49	6.51	3.25	YES HRDOW
L0000082	0	0.26370E-05	463420.8	3771737.0	358.0	3.49	6.51	3.25	YES HRDOW
L0000083	0	0.26370E-05	463420.7	3771723.0	358.0	3.49	6.51	3.25	YES HRDOW
L0000084	0	0.26370E-05	463420.7	3771709.0	358.0	3.49	6.51	3.25	YES HRDOW
L0000085	0	0.26370E-05	463420.7	3771695.0	358.0	3.49	6.51	3.25	YES HRDOW
L0000086	0	0.26370E-05	463420.7	3771681.0	358.0	3.49	6.51	3.25	YES HRDOW
L0000087	0	0.26370E-05	463420.6	3771667.0	357.7	3.49	6.51	3.25	YES HRDOW
L0000088	0	0.26370E-05	463420.6	3771653.0	357.2	3.49	6.51	3.25	YES HRDOW
L0000089	0	0.26370E-05	463420.6	3771639.0	357.0	3.49	6.51	3.25	YES HRDOW
L0000090	0	0.26370E-05	463420.6	3771625.0	357.0	3.49	6.51	3.25	YES HRDOW
L0000091	0	0.26370E-05	463420.5	3771611.0	356.8	3.49	6.51	3.25	YES HRDOW
L0000092	0	0.26370E-05	463420.5	3771597.0	356.4	3.49	6.51	3.25	YES HRDOW
L0000093	0	0.26370E-05	463420.5	3771583.0	356.0	3.49	6.51	3.25	YES HRDOW
L0000094	0	0.26370E-05	463420.5	3771569.0	356.0	3.49	6.51	3.25	YES HRDOW
L0000095	0	0.26370E-05	463420.4	3771555.0	355.9	3.49	6.51	3.25	YES HRDOW
L0000096	0	0.26370E-05	463420.4	3771541.0	355.5	3.49	6.51	3.25	YES HRDOW
L0000097	0	0.26370E-05	463420.4	3771527.0	355.0	3.49	6.51	3.25	YES HRDOW
L0000098	0	0.26370E-05	463420.4	3771513.0	355.0	3.49	6.51	3.25	YES HRDOW
L0000099	0	0.26370E-05	463420.3	3771499.0	355.0	3.49	6.51	3.25	YES HRDOW
L0000100	0	0.26370E-05	463420.3	3771485.0	354.6	3.49	6.51	3.25	YES HRDOW
L0000101	0	0.26370E-05	463420.3	3771471.0	354.2	3.49	6.51	3.25	YES HRDOW
L0000102	0	0.26370E-05	463420.3	3771457.0	354.0	3.49	6.51	3.25	YES HRDOW
L0000103	0	0.26370E-05	463420.2	3771443.0	354.0	3.49	6.51	3.25	YES HRDOW
L0000104	0	0.26370E-05	463420.2	3771429.0	354.0	3.49	6.51	3.25	YES HRDOW
L0000105	0	0.26370E-05	463420.2	3771415.0	354.0	3.49	6.51	3.25	YES HRDOW

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 L0000106         0   0.26370E-05  463420.2 3771401.0   353.8     3.49     6.51     3.25
 YES   HRDOW
 L0000107         0   0.26370E-05  463420.1 3771387.0   353.4     3.49     6.51     3.25
 YES   HRDOW
 L0000108         0   0.26370E-05  463420.1 3771373.0   353.0     3.49     6.51     3.25
 YES   HRDOW
 L0000109         0   0.26370E-05  463420.1 3771359.0   353.0     3.49     6.51     3.25
 YES   HRDOW
 L0000110         0   0.26370E-05  463420.1 3771345.0   352.9     3.49     6.51     3.25
 YES   HRDOW
 L0000111         0   0.26370E-05  463420.0 3771331.0   352.5     3.49     6.51     3.25
 YES   HRDOW
 L0000112         0   0.26370E-05  463420.0 3771317.0   352.0     3.49     6.51     3.25
 YES   HRDOW
 L0000113         0   0.26370E-05  463420.0 3771303.0   352.0     3.49     6.51     3.25
 YES   HRDOW
 L0000114         0   0.26370E-05  463420.0 3771289.0   352.0     3.49     6.51     3.25
 YES   HRDOW
 L0000115         0   0.26370E-05  463419.9 3771275.0   351.6     3.49     6.51     3.25
 YES   HRDOW
 L0000116         0   0.26370E-05  463419.9 3771261.0   351.2     3.49     6.51     3.25
 YES   HRDOW
 L0000117         0   0.26370E-05  463419.9 3771247.0   351.0     3.49     6.51     3.25
 YES   HRDOW
 L0000118         0   0.26370E-05  463419.9 3771233.0   351.0     3.49     6.51     3.25
 YES   HRDOW
 L0000119         0   0.26370E-05  463419.8 3771219.0   350.8     3.49     6.51     3.25
 YES   HRDOW
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

                      PAGE   5
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*


                                                *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.
              URBAN  EMISSION RATE
   SOURCE      PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY       SZ
   SOURCE  SCALAR VARY
     ID        CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
     (METERS)             BY
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 - - - - - - - - - - - - -

 L0000120         0   0.26370E-05  463419.8 3771205.0   350.3     3.49     6.51     3.25
 YES   HRDOW
 L0000121         0   0.26370E-05  463419.8 3771191.0   350.0     3.49     6.51     3.25
 YES   HRDOW
 L0000122         0   0.26370E-05  463419.8 3771177.0   350.0     3.49     6.51     3.25
 YES   HRDOW
 L0000123         0   0.26370E-05  463419.7 3771163.0   350.0     3.49     6.51     3.25
 YES   HRDOW
 L0000124         0   0.26370E-05  463419.7 3771149.0   350.0     3.49     6.51     3.25
 YES   HRDOW
 L0000125         0   0.26370E-05  463419.7 3771135.0   349.9     3.49     6.51     3.25
 YES   HRDOW
 L0000126         0   0.26370E-05  463419.6 3771121.0   349.5     3.49     6.51     3.25
 YES   HRDOW
 L0000127         0   0.26370E-05  463419.6 3771107.0   349.0     3.49     6.51     3.25
 YES   HRDOW
 L0000128         0   0.26370E-05  463419.6 3771093.0   349.0     3.49     6.51     3.25
 YES   HRDOW
```

L0000129	0	0.26370E-05	463419.6	3771079.0	349.0	3.49	6.51	3.25	
YES	HRDOW								
L0000130	0	0.26370E-05	463419.5	3771065.0	348.6	3.49	6.51	3.25	
YES	HRDOW								
L0000131	0	0.26370E-05	463419.5	3771051.0	348.2	3.49	6.51	3.25	
YES	HRDOW								
L0000132	0	0.26370E-05	463419.5	3771037.0	348.0	3.49	6.51	3.25	
YES	HRDOW								
L0000133	0	0.26370E-05	463419.5	3771023.0	348.0	3.49	6.51	3.25	
YES	HRDOW								
L0000134	0	0.26370E-05	463419.5	3771009.0	347.8	3.49	6.51	3.25	
YES	HRDOW								
L0000135	0	0.26370E-05	463419.4	3770995.0	347.3	3.49	6.51	3.25	
YES	HRDOW								
L0000136	0	0.26370E-05	463419.4	3770981.0	347.0	3.49	6.51	3.25	
YES	HRDOW								
L0000137	0	0.26370E-05	463419.4	3770967.0	347.0	3.49	6.51	3.25	
YES	HRDOW								
L0000138	0	0.26370E-05	463419.4	3770953.0	347.0	3.49	6.51	3.25	
YES	HRDOW								
L0000139	0	0.26370E-05	463419.4	3770939.0	347.0	3.49	6.51	3.25	
YES	HRDOW								
L0000140	0	0.26370E-05	463419.4	3770925.0	346.9	3.49	6.51	3.25	
YES	HRDOW								
L0000141	0	0.26370E-05	463419.3	3770911.0	346.5	3.49	6.51	3.25	
YES	HRDOW								
L0000142	0	0.26370E-05	463419.3	3770897.0	346.0	3.49	6.51	3.25	
YES	HRDOW								
L0000143	0	0.26370E-05	463419.3	3770883.0	346.0	3.49	6.51	3.25	
YES	HRDOW								
L0000144	0	0.26370E-05	463419.3	3770869.0	346.0	3.49	6.51	3.25	
YES	HRDOW								
L0000145	0	0.26370E-05	463419.3	3770855.0	345.6	3.49	6.51	3.25	
YES	HRDOW								
L0000146	0	0.26370E-05	463419.3	3770841.0	345.2	3.49	6.51	3.25	
YES	HRDOW								
L0000147	0	0.26370E-05	463419.3	3770827.0	345.0	3.49	6.51	3.25	
YES	HRDOW								
L0000148	0	0.26370E-05	463419.2	3770813.0	345.0	3.49	6.51	3.25	
YES	HRDOW								
L0000149	0	0.26370E-05	463419.2	3770799.0	344.8	3.49	6.51	3.25	
YES	HRDOW								
L0000150	0	0.26370E-05	463419.2	3770785.0	344.3	3.49	6.51	3.25	
YES	HRDOW								
L0000151	0	0.26370E-05	463419.2	3770771.0	344.0	3.49	6.51	3.25	
YES	HRDOW								
L0000152	0	0.26370E-05	463419.2	3770757.0	344.0	3.49	6.51	3.25	
YES	HRDOW								
L0000153	0	0.26370E-05	463419.2	3770743.0	343.9	3.49	6.51	3.25	
YES	HRDOW								
L0000154	0	0.26370E-05	463419.1	3770729.0	343.4	3.49	6.51	3.25	
YES	HRDOW								
L0000155	0	0.26370E-05	463419.1	3770715.0	343.0	3.49	6.51	3.25	
YES	HRDOW								
L0000156	0	0.26370E-05	463419.1	3770701.0	343.0	3.49	6.51	3.25	
YES	HRDOW								
L0000157	0	0.26370E-05	463419.1	3770687.0	343.0	3.49	6.51	3.25	
YES	HRDOW								
L0000158	0	0.26370E-05	463419.1	3770673.0	342.6	3.49	6.51	3.25	
YES	HRDOW								
L0000159	0	0.26370E-05	463419.1	3770659.0	342.1	3.49	6.51	3.25	
YES	HRDOW								

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER URBAN SOURCE PART.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ
L0000160	0	0.26370E-05	463419.0	3770645.0	342.0	3.49	6.51	3.25
YES	HRDOW							
L0000161	0	0.26370E-05	463419.0	3770631.0	342.0	3.49	6.51	3.25
YES	HRDOW							
L0000162	0	0.26370E-05	463419.0	3770617.0	341.7	3.49	6.51	3.25
YES	HRDOW							
L0000163	0	0.26370E-05	463419.0	3770603.0	341.2	3.49	6.51	3.25
YES	HRDOW							
L0000164	0	0.26370E-05	463419.0	3770589.0	341.0	3.49	6.51	3.25
YES	HRDOW							
L0000165	0	0.26370E-05	463419.0	3770575.0	341.0	3.49	6.51	3.25
YES	HRDOW							
L0000166	0	0.26370E-05	463419.0	3770561.0	341.0	3.49	6.51	3.25
YES	HRDOW							
L0000167	0	0.26370E-05	463418.9	3770547.0	341.0	3.49	6.51	3.25
YES	HRDOW							
L0000168	0	0.26370E-05	463418.9	3770533.0	340.9	3.49	6.51	3.25
YES	HRDOW							
L0000169	0	0.26370E-05	463418.9	3770519.0	340.4	3.49	6.51	3.25
YES	HRDOW							
L0000170	0	0.26370E-05	463418.9	3770505.0	340.0	3.49	6.51	3.25
YES	HRDOW							
L0000171	0	0.26370E-05	463418.9	3770491.0	340.0	3.49	6.51	3.25
YES	HRDOW							
L0000172	0	0.26370E-05	463418.9	3770477.0	340.0	3.49	6.51	3.25
YES	HRDOW							
L0000173	0	0.26370E-05	463418.8	3770463.0	340.0	3.49	6.51	3.25
YES	HRDOW							
L0000174	0	0.26370E-05	463418.8	3770449.0	340.0	3.49	6.51	3.25
YES	HRDOW							
L0000175	0	0.26370E-05	463418.8	3770435.0	340.0	3.49	6.51	3.25
YES	HRDOW							
L0000176	0	0.26370E-05	463418.8	3770421.0	340.0	3.49	6.51	3.25
YES	HRDOW							
L0000177	0	0.26370E-05	463418.8	3770407.0	339.7	3.49	6.51	3.25
YES	HRDOW							
L0000178	0	0.26370E-05	463418.8	3770393.0	339.2	3.49	6.51	3.25
YES	HRDOW							
L0000179	0	0.26370E-05	463418.7	3770379.0	339.0	3.49	6.51	3.25
YES	HRDOW							
L0000180	0	0.26370E-05	463418.7	3770365.0	339.0	3.49	6.51	3.25
YES	HRDOW							
L0000181	0	0.26370E-05	463418.7	3770351.0	339.0	3.49	6.51	3.25
YES	HRDOW							
L0000182	0	0.26370E-05	463418.7	3770337.0	339.0	3.49	6.51	3.25
YES	HRDOW							
L0000183	0	0.26370E-05	463418.7	3770323.0	338.9	3.49	6.51	3.25
YES	HRDOW							
L0000184	0	0.26370E-05	463418.7	3770309.0	338.4	3.49	6.51	3.25
YES	HRDOW							

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 L0000185         0   0.26370E-05  463418.7 3770295.0   338.0     3.49     6.51     3.25
 YES   HRDOW
 L0000186         0   0.26370E-05  463419.6 3770281.0   338.0     3.49     6.51     3.25
 YES   HRDOW
 L0000187         0   0.26370E-05  463421.4 3770267.1   337.9     3.49     6.51     3.25
 YES   HRDOW
 L0000188         0   0.26370E-05  463423.2 3770253.3   337.5     3.49     6.51     3.25
 YES   HRDOW
 L0000189         0   0.26370E-05  463425.0 3770239.4   337.1     3.49     6.51     3.25
 YES   HRDOW
 L0000190         0   0.26370E-05  463426.8 3770225.5   336.9     3.49     6.51     3.25
 YES   HRDOW
 L0000191         0   0.26370E-05  463428.5 3770211.6   336.8     3.49     6.51     3.25
 YES   HRDOW
 L0000192         0   0.26370E-05  463430.3 3770197.7   336.5     3.49     6.51     3.25
 YES   HRDOW
 L0000193         0   0.26370E-05  463432.1 3770183.8   336.2     3.49     6.51     3.25
 YES   HRDOW
 L0000194         0   0.26370E-05  463433.9 3770169.9   336.0     3.49     6.51     3.25
 YES   HRDOW
 L0000195         0   0.26370E-05  463435.7 3770156.0   336.0     3.49     6.51     3.25
 YES   HRDOW
 L0000196         0   0.26370E-05  463437.5 3770142.2   335.9     3.49     6.51     3.25
 YES   HRDOW
 L0000197         0   0.26370E-05  463439.2 3770128.3   335.6     3.49     6.51     3.25
 YES   HRDOW
 L0000198         0   0.26370E-05  463441.0 3770114.4   335.3     3.49     6.51     3.25
 YES   HRDOW
 L0000199         0   0.26370E-05  463442.8 3770100.5   335.1     3.49     6.51     3.25
 YES   HRDOW
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

                    PAGE   7
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*


                                                *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.
              URBAN  EMISSION RATE
   SOURCE      PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY       SZ
   SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
     (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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 L0000200         0   0.26370E-05  463444.6 3770086.6   335.0     3.49     6.51     3.25
 YES   HRDOW
 L0000201         0   0.26370E-05  463446.4 3770072.7   335.0     3.49     6.51     3.25
 YES   HRDOW
 L0000202         0   0.26370E-05  463448.2 3770058.8   335.0     3.49     6.51     3.25
 YES   HRDOW
 L0000203         0   0.26370E-05  463449.9 3770045.0   335.0     3.49     6.51     3.25
 YES   HRDOW
 L0000204         0   0.26370E-05  463450.1 3770031.0   335.0     3.49     6.51     3.25
 YES   HRDOW
 L0000205         0   0.26370E-05  463450.3 3770017.0   335.0     3.49     6.51     3.25
 YES   HRDOW
 L0000206         0   0.26370E-05  463450.5 3770003.0   335.0     3.49     6.51     3.25
 YES   HRDOW
 L0000207         0   0.26370E-05  463450.7 3769989.0   335.0     3.49     6.51     3.25
 YES   HRDOW
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L0000208	0	0.26370E-05	463450.9	3769975.0	335.0	3.49	6.51	3.25	
YES HRDOW									
L0000209	0	0.26370E-05	463451.0	3769961.0	335.0	3.49	6.51	3.25	
YES HRDOW									
L0000210	0	0.26370E-05	463451.2	3769947.0	335.0	3.49	6.51	3.25	
YES HRDOW									
L0000211	0	0.26370E-05	463451.4	3769933.0	335.0	3.49	6.51	3.25	
YES HRDOW									
L0000212	0	0.26370E-05	463451.6	3769919.0	335.0	3.49	6.51	3.25	
YES HRDOW									
L0000213	0	0.26370E-05	463451.7	3769905.0	335.0	3.49	6.51	3.25	
YES HRDOW									
L0000214	0	0.26370E-05	463451.9	3769891.0	335.0	3.49	6.51	3.25	
YES HRDOW									
L0000215	0	0.26370E-05	463452.1	3769877.0	335.0	3.49	6.51	3.25	
YES HRDOW									
L0000216	0	0.26370E-05	463452.3	3769863.0	335.0	3.49	6.51	3.25	
YES HRDOW									
L0000217	0	0.26370E-05	463452.4	3769849.0	335.0	3.49	6.51	3.25	
YES HRDOW									
L0000218	0	0.26370E-05	463452.6	3769835.0	336.1	3.49	6.51	3.25	
YES HRDOW									
L0000219	0	0.26370E-05	463452.8	3769821.0	337.4	3.49	6.51	3.25	
YES HRDOW									

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	VOL1 , L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 ,
	L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 ,
	L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 ,
	L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , L0000029 , L0000030 , L0000031 ,
	L0000032 , L0000033 , L0000034 , L0000035 , L0000036 , L0000037 , L0000038 , L0000039 ,
	L0000040 , L0000041 , L0000042 , L0000043 , L0000044 , L0000045 , L0000046 , L0000047 ,
	L0000048 , L0000049 , L0000050 , L0000051 , L0000052 , L0000053 , L0000054 , L0000055 ,
	L0000056 , L0000057 , L0000058 , L0000059 , L0000060 , L0000061 , L0000062 , L0000063 ,
	L0000064 , L0000065 , L0000066 , L0000067 , L0000068 , L0000069 , L0000070 , L0000071 ,

L0000072 , L0000073 , L0000074 , L0000075 , L0000076 , L0000077
, L0000078 , L0000079 ,

L0000080 , L0000081 , L0000082 , L0000083 , L0000084 , L0000085
, L0000086 , L0000087 ,

L0000088 , L0000089 , L0000090 , L0000091 , L0000092 , L0000093
, L0000094 , L0000095 ,

L0000096 , L0000097 , L0000098 , L0000099 , L0000100 , L0000101
, L0000102 , L0000103 ,

L0000104 , L0000105 , L0000106 , L0000107 , L0000108 , L0000109
, L0000110 , L0000111 ,

L0000112 , L0000113 , L0000114 , L0000115 , L0000116 , L0000117
, L0000118 , L0000119 ,

L0000120 , L0000121 , L0000122 , L0000123 , L0000124 , L0000125
, L0000126 , L0000127 ,

L0000128 , L0000129 , L0000130 , L0000131 , L0000132 , L0000133
, L0000134 , L0000135 ,

L0000136 , L0000137 , L0000138 , L0000139 , L0000140 , L0000141
, L0000142 , L0000143 ,

L0000144 , L0000145 , L0000146 , L0000147 , L0000148 , L0000149
, L0000150 , L0000151 ,

L0000152 , L0000153 , L0000154 , L0000155 , L0000156 , L0000157
, L0000158 , L0000159 ,

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

L0000160 , L0000161 , L0000162 , L0000163 , L0000164 , L0000165
, L0000166 , L0000167 ,

L0000168 , L0000169 , L0000170 , L0000171 , L0000172 , L0000173
, L0000174 , L0000175 ,

L0000176 , L0000177 , L0000178 , L0000179 , L0000180 , L0000181
, L0000182 , L0000183 ,

L0000184 , L0000185 , L0000186 , L0000187 , L0000188 , L0000189
, L0000190 , L0000191 ,

L0000192 , L0000193 , L0000194 , L0000195 , L0000196 , L0000197
, L0000198 , L0000199 ,

L0000200 , L0000201 , L0000202 , L0000203 , L0000204 , L0000205
, L0000206 , L0000207 ,

L0000208 , L0000209 , L0000210 , L0000211 , L0000212 , L0000213

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

2035210. VOL1 , L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 ,

L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 ,

L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 ,

L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , L0000029 , L0000030 , L0000031 ,

L0000032 , L0000033 , L0000034 , L0000035 , L0000036 , L0000037 , L0000038 , L0000039 ,

L0000040 , L0000041 , L0000042 , L0000043 , L0000044 , L0000045 , L0000046 , L0000047 ,

L0000048 , L0000049 , L0000050 , L0000051 , L0000052 , L0000053 , L0000054 , L0000055 ,

L0000056 , L0000057 , L0000058 , L0000059 , L0000060 , L0000061 , L0000062 , L0000063 ,

L0000064 , L0000065 , L0000066 , L0000067 , L0000068 , L0000069 , L0000070 , L0000071 ,

L0000072 , L0000073 , L0000074 , L0000075 , L0000076 , L0000077 , L0000078 , L0000079 ,

L0000080 , L0000081 , L0000082 , L0000083 , L0000084 , L0000085 , L0000086 , L0000087 ,

L0000088 , L0000089 , L0000090 , L0000091 , L0000092 , L0000093 , L0000094 , L0000095 ,

L0000096 , L0000097 , L0000098 , L0000099 , L0000100 , L0000101 , L0000102 , L0000103 ,

L0000104 , L0000105 , L0000106 , L0000107 , L0000108 , L0000109 , L0000110 , L0000111 ,

L0000112 , L0000113 , L0000114 , L0000115 , L0000116 , L0000117 , L0000118 , L0000119 ,

L0000120 , L0000121 , L0000122 , L0000123 , L0000124 , L0000125 , L0000126 , L0000127 ,

L0000128 , L0000129 , L0000130 , L0000131 , L0000132 , L0000133
, L0000134 , L0000135 ,

L0000136 , L0000137 , L0000138 , L0000139 , L0000140 , L0000141
, L0000142 , L0000143 ,

L0000144 , L0000145 , L0000146 , L0000147 , L0000148 , L0000149
, L0000150 , L0000151 ,

L0000152 , L0000153 , L0000154 , L0000155 , L0000156 , L0000157
, L0000158 , L0000159 ,

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

L0000160 , L0000161 , L0000162 , L0000163 , L0000164 , L0000165
, L0000166 , L0000167 ,

L0000168 , L0000169 , L0000170 , L0000171 , L0000172 , L0000173
, L0000174 , L0000175 ,

L0000176 , L0000177 , L0000178 , L0000179 , L0000180 , L0000181
, L0000182 , L0000183 ,

L0000184 , L0000185 , L0000186 , L0000187 , L0000188 , L0000189
, L0000190 , L0000191 ,

L0000192 , L0000193 , L0000194 , L0000195 , L0000196 , L0000197
, L0000198 , L0000199 ,

L0000200 , L0000201 , L0000202 , L0000203 , L0000204 , L0000205
, L0000206 , L0000207 ,

L0000208 , L0000209 , L0000210 , L0000211 , L0000212 , L0000213
, L0000214 , L0000215 ,

L0000216 , L0000217 , L0000218 , L0000219 ,

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL1 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000001 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

(HRDOW) *

SOURCE ID = L0000002 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000004 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000005 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000006 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000008 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000009 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000011 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000012 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00										

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000013 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000014 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14

```
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000015     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000016     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
```

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***        11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000017     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***        11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *
```

```
 SOURCE ID = L0000018     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000019     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000020 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000021 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000022 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000023 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000024     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

                      PAGE  37
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000025     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
```

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000026 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000027 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000028 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000029 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000030 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22					

```
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***        11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000031     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***        11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000032     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
```

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000033 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

```
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                          ***       11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000035     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                          ***       11:10:30
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000036 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

FF *** AERMOD - VERSION 21112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst Rialto\14014 Ops\14 *** 01/04/22
*** AERMET - VERSION 16216 ***
*** *** 11:10:30

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000037 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000038 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000039 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												

DAY OF WEEK = SUNDAY

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000040 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

DAY OF WEEK = SATURDAY

DAY OF WEEK = SUNDAY

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000041 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

```
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***        11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000042     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***        11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *
```

SOURCE ID = L0000043 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000044 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                  (HRDOW) *

SOURCE ID = L0000045   ; SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

FF *** AERMOD - VERSION 21112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst Rialto\14014 Ops\14 *** 01/04/22
*** AERMET - VERSION 16216 ***
*** *** 11:10:30

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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000047 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000049 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000050 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - - - - - - - - - - - - - - - -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000051 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - - - - - - - - - - - - - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000052 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000053 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000054 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000055 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

FF *** AERMOD - VERSION 21112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst Rialto\14014 Ops\14 *** 01/04/22

*** AERMET - VERSION 16216 ***

*** *** 11:10:30

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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000056 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000058 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000060     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000061 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000062 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000063 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000064 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			

DAY OF WEEK = SUNDAY

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000065 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

DAY OF WEEK = SATURDAY

DAY OF WEEK = SUNDAY

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000066 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000067 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK

(HRDOW) *

SOURCE ID = L0000068 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000070 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
16	.1000E+01												
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
24	.0000E+00												
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
16	.0000E+00												
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
24	.0000E+00												
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
16	.0000E+00												
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
24	.0000E+00												

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000071 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
16	.1000E+01												
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
24	.0000E+00												
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
16	.0000E+00												
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
24	.0000E+00												

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000072 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000074 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000075 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000077 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000078 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00										

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000079 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000080 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14

```
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000081     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000082     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
```

```
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

                     PAGE  95
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000083     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

                     PAGE  96
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *
```

```
 SOURCE ID = L0000084     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

                      PAGE  97
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000085     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000086 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000087 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000088 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000089 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***        11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000090     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***        11:10:30

                      PAGE 103
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000091     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
```

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000092 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000093 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000094 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000095 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000096 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22					

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000097 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000098 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000099 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000100 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR

```
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                          ***       11:10:30

                     PAGE 113
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000101     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                          ***       11:10:30
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000102 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000103 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000104 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000105 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												

DAY OF WEEK = SUNDAY

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000106 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

DAY OF WEEK = SATURDAY

DAY OF WEEK = SUNDAY

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000107 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000108 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000109 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000110 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                  (HRDOW) *

SOURCE ID = L0000111   ; SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000113 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00								
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00
23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00								
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00
23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000115 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR								

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00								
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00
23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00								
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00
23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00								
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00
23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000116 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR								

- - - - - - - - - - - - - - - - - - -

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00								
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00								
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00								
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000117 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

- - - - - - - - - - - - - - - - - - -

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00								
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00								
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00								
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000118 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000120 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000121 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

FF *** AERMOD - VERSION 21112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst Rialto\14014 Ops\14 *** 01/04/22

*** AERMET - VERSION 16216 ***

*** *** 11:10:30

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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000122 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000124 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                          ***       11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000126     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                          ***       11:10:30
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000127 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000128 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

                      PAGE 141
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000129     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                             DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                             DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                             DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

                      PAGE 142
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000130     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                             DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                             DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
```

.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000131 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000132 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000133 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK

(HRDOW) *

SOURCE ID = L0000134 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000136 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
16	.1000E+01												
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
24	.0000E+00												
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
16	.0000E+00												
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
24	.0000E+00												
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
16	.0000E+00												
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
24	.0000E+00												

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000137 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
16	.1000E+01												
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
24	.0000E+00												
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
16	.0000E+00												
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
24	.0000E+00												

DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000138 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000140     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000141     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
```

- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000143 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000144 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00										

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000145 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000146 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14

```
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000147     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000148     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
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    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***        11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000149     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***        11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *
```

```
 SOURCE ID = L0000150     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

                      PAGE 163
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000151     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000152 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000153 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000154 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000155 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000156     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

                     PAGE 169
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000157     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
```

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000158 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000159 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000160 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000161 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000162 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22					

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000163 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000164 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000165 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

```
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                          ***       11:10:30

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000167     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                          ***       11:10:30
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000168 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

FF *** AERMOD - VERSION 21112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst Rialto\14014 Ops\14 *** 01/04/22
*** AERMET - VERSION 16216 ***
*** *** 11:10:30

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000169 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000170 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000171 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

DAY OF WEEK = SUNDAY

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000172 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

DAY OF WEEK = SATURDAY

DAY OF WEEK = SUNDAY

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000173 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000174 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

SOURCE ID = L0000175 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000176 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                  (HRDOW) *

SOURCE ID = L0000177   ; SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000179 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00								
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00
23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00								
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00
23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000181 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00								
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00
23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00								
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00
23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00								
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00
23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000182 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR						

- - - - - - - - - - - - - - - - - - -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000183 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - - - - - - - - - - - - - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000184 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000186 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000187 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000188 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000189 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14

.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000190 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000191 ; SOURCE TYPE = VOLUME :

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -

                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

                      PAGE 204
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000192     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -

                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000193 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000194 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000195 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000196 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			

.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000197 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000198 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000199 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK

(HRDOW) *

SOURCE ID = L0000200 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000202 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
16	.1000E+01												
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
24	.0000E+00												
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
16	.0000E+00												
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
24	.0000E+00												
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
16	.0000E+00												
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
24	.0000E+00												

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000203 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
16	.1000E+01												
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
24	.0000E+00												
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
16	.0000E+00												
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
24	.0000E+00												

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000204 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000206 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000207 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000209 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000210 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00										

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000211 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000212 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14

```
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

                     PAGE 225
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000213     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

                     PAGE 226
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000214     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
```

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***        11:10:30

                     PAGE 227
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000215     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***        11:10:30

                     PAGE 228
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *
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```
 SOURCE ID = L0000216     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

                      PAGE 229
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000217     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000218 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000219 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(463379.0, 3772828.3, 375.4, 375.4, 0.0); (463378.7, 3772793.0, 375.0, 375.0, 0.0);
(463386.4, 3772775.1, 374.6, 374.6, 0.0); (463386.4, 3772739.3, 374.0, 374.0, 0.0);
(463446.7, 3772649.0, 372.4, 372.4, 0.0); (463521.8, 3772649.6, 372.8, 372.8, 0.0);
(463733.3, 3772861.0, 374.0, 374.0, 0.0); (463734.7, 3772804.1, 372.6, 372.6, 0.0);
(463733.2, 3772710.6, 371.0, 371.0, 0.0); (463734.0, 3772593.8, 370.0, 370.0, 0.0);
(463613.6, 3772559.9, 370.8, 370.8, 0.0); (463577.4, 3772560.7, 371.4, 371.4, 0.0);
(463661.6, 3772875.1, 374.9, 374.9, 0.0); (463661.6, 3772854.1, 374.2, 374.2, 0.0);
(463447.1, 3772589.7, 371.9, 371.9, 0.0); (463445.6, 3772439.1, 369.1, 369.1, 0.0);
(463438.3, 3772414.3, 368.6, 368.6, 0.0); (463474.3, 3772439.9, 369.0, 369.0, 0.0);
(463519.0, 3772441.7, 369.0, 369.0, 0.0); (463552.8, 3772441.3, 368.8, 368.8, 0.0);
(463391.5, 3772427.4, 369.0, 369.0, 0.0); (463401.7, 3772414.7, 368.6, 368.6, 0.0);
(463377.8, 3772436.3, 369.3, 369.3, 0.0); (463384.6, 3772595.1, 371.6, 371.6, 0.0);
(463384.2, 3772515.9, 370.8, 370.8, 0.0); (463609.5, 3772441.0, 368.5, 368.5, 0.0);
(463632.1, 3772444.3, 368.6, 368.6, 0.0); (463664.0, 3772442.1, 368.0, 368.0, 0.0);
(463683.8, 3772440.8, 368.0, 368.0, 0.0); (463710.3, 3772441.0, 367.7, 367.7, 0.0);
(463732.6, 3772441.6, 367.5, 367.5, 0.0); (463762.6, 3772441.8, 367.3, 367.3, 0.0);
(463797.0, 3772440.8, 367.0, 367.0, 0.0); (463536.8, 3772423.7, 368.9, 368.9, 0.0);
(463439.6, 3772386.2, 368.0, 368.0, 0.0); (463609.8, 3772390.4, 367.5, 367.5, 0.0);
(463566.5, 3772406.9, 368.0, 368.0, 0.0); (463008.9, 3772845.4, 377.0, 377.0, 0.0);
(463009.1, 3772819.8, 376.7, 376.7, 0.0); (463008.8, 3772793.9, 376.2, 376.2, 0.0);
(463008.7, 3772766.5, 375.8, 375.8, 0.0); (463008.9, 3772744.4, 375.4, 375.4, 0.0);
(463008.9, 3772721.8, 374.9, 374.9, 0.0); (462951.6, 3772791.9, 376.7, 376.7, 0.0);
(462972.6, 3772845.3, 377.0, 377.0, 0.0); (462949.6, 3772767.9, 376.3, 376.3, 0.0);
(462952.9, 3772743.4, 375.6, 375.6, 0.0); (462950.9, 3772718.3, 375.0, 375.0, 0.0);
(463190.8, 3772849.3, 376.1, 376.1, 0.0); (463190.5,

3772814.8, 375.9, 375.9, 0.0); (463163.4, 3772704.8, 374.0, 374.0, 0.0); (463163.0, 3772674.7, 373.3, 373.3, 0.0); (463168.8, 3772530.6, 371.0, 371.0, 0.0); (463169.1, 3772504.7, 370.8, 370.8, 0.0); (463002.5, 3772905.2, 378.0, 378.0, 0.0); (463005.3, 3772956.0, 378.7, 378.7, 0.0); (463007.9, 3773002.1, 379.2, 379.2, 0.0); (463344.5, 3772923.7, 377.0, 377.0, 0.0); (463094.0, 3772923.2, 377.9, 377.9, 0.0); (463344.6, 3773184.9, 381.3, 381.3, 0.0); (463343.0, 3772961.2, 377.8, 377.8, 0.0); (463344.1, 3773220.8, 382.0, 382.0, 0.0); (462927.8, 3772926.9, 378.7, 378.7, 0.0); (462917.2, 3773075.2, 380.6, 380.6, 0.0); (462820.7, 3772925.8, 379.0, 379.0, 0.0); (462945.7, 3772844.1, 377.7, 377.7, 0.0); (462919.9, 3772843.0, 377.9, 377.9, 0.0); (463804.8, 3772951.5, 375.5, 375.5, 0.0); (464006.0, 3772950.2, 374.5, 374.5, 0.0); (463491.4, 3773312.7, 382.6, 382.6, 0.0); (463542.3, 3773312.1, 382.5, 382.5, 0.0); (463607.5, 3773313.4, 382.0, 382.0, 0.0); (463940.2, 3772860.2, 373.5, 373.5, 0.0); (464302.7, 3772774.6, 370.3, 370.3, 0.0); (464302.0, 3772504.6, 366.0, 366.0, 0.0); (463665.8, 3772387.2, 367.0, 367.0, 0.0); (463684.8, 3772386.4, 367.0, 367.0, 0.0); (463712.7, 3772389.5, 366.8, 366.8, 0.0); (463767.2, 3772382.6, 366.2, 366.2, 0.0); (463770.2, 3772407.8, 366.6, 366.6, 0.0); (463838.1, 3772443.2, 367.0, 367.0, 0.0); (463860.2, 3772441.3, 367.0, 367.0, 0.0); (463375.0, 3772395.5, 368.5, 368.5, 0.0); (463377.1, 3772364.4, 368.0, 368.0, 0.0); (463439.9, 3772363.6, 367.9, 367.9, 0.0); (463438.5, 3772343.8, 367.2, 367.2, 0.0); (463439.5, 3772308.7, 367.0, 367.0, 0.0); (463439.9, 3772282.1, 366.2, 366.2, 0.0); (463438.5, 3772230.6, 365.5, 365.5, 0.0); (463403.7, 3772244.3, 366.0, 366.0, 0.0);

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(463404.1, 3772196.9, 365.2, 365.2, 0.0); (463404.8, 3772173.7, 365.0, 365.0, 0.0); (463856.1, 3773300.9, 380.5, 380.5, 0.0); (463931.0, 3773300.4, 380.1, 380.1, 0.0); (463911.2, 3773332.0, 381.0, 381.0, 0.0);

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***

(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file:
FONT_V9_ADJU\FONT_v9.SFC Met
Version: 16216
Profile file:
FONT_V9_ADJU\FONT_v9.PFL
Surface format:
FREE

Profile format:
FREE

Surface station no.: 3102 Upper air station no.: 3190
Name: UNKNOWN Name:
UNKNOWN
Year: 2011 Year: 2011

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
11	01	01	1	01	-18.5	0.194	-9.000	-9.000	-999.	204.	41.2	0.25	2.82	1.00	1.80	69.	9.1	276.4	5.5
11	01	01	1	02	-23.8	0.239	-9.000	-9.000	-999.	281.	63.0	0.25	2.82	1.00	2.20	52.	9.1	275.4	5.5
11	01	01	1	03	-18.5	0.194	-9.000	-9.000	-999.	205.	41.2	0.25	2.82	1.00	1.80				

```
 32.    9.1  275.4    5.5
 11 01 01   1 04   -1.4  0.067 -9.000 -9.000 -999.   57.     18.3  0.25   2.82   1.00    0.40
 27.    9.1  274.2    5.5
 11 01 01   1 05  -18.6  0.194 -9.000 -9.000 -999.  204.     41.2  0.25   2.82   1.00    1.80
 51.    9.1  274.2    5.5
 11 01 01   1 06  -29.7  0.296 -9.000 -9.000 -999.  387.     96.6  0.25   2.82   1.00    2.70
 53.    9.1  274.2    5.5
 11 01 01   1 07  -24.0  0.239 -9.000 -9.000 -999.  282.     63.0  0.25   2.82   1.00    2.20
 70.    9.1  274.2    5.5
 11 01 01   1 08   -8.4  0.138 -9.000 -9.000 -999.  127.     27.3  0.25   2.82   0.54    1.30
 72.    9.1  275.4    5.5
 11 01 01   1 09   44.3  0.280  0.571  0.005  147.  356.    -43.5  0.25   2.82   0.32    2.20
 67.    9.1  277.5    5.5
 11 01 01   1 10  122.7  0.264  0.952  0.005  247.  326.    -13.2  0.25   2.82   0.25    1.80
 83.    9.1  279.9    5.5
 11 01 01   1 11  179.8  0.316  1.733  0.005 1017.  426.    -15.4  0.25   2.82   0.22    2.20
 58.    9.1  282.0    5.5
 11 01 01   1 12  206.0  0.320  1.940  0.008 1244.  435.    -14.0  0.25   2.82   0.21    2.20
 115.    9.1  283.1    5.5
 11 01 01   1 13  132.6  0.214  1.733  0.009 1377.  243.     -6.5  0.25   2.82   0.21    1.30
 147.    9.1  284.2    5.5
 11 01 01   1 14  147.0  0.216  1.818  0.009 1431.  242.     -6.0  0.25   2.82   0.23    1.30
 219.    9.1  284.9    5.5
 11 01 01   1 15  104.0  0.208  1.633  0.009 1468.  228.     -7.6  0.25   2.82   0.26    1.30
 126.    9.1  285.4    5.5
 11 01 01   1 16   26.4  0.140  1.037  0.009 1477.  127.     -9.1  0.25   2.82   0.35    0.90
 151.    9.1  284.9    5.5
 11 01 01   1 17   -9.0  0.137 -9.000 -9.000 -999.  121.     24.9  0.25   2.82   0.63    1.30
 69.    9.1  283.1    5.5
 11 01 01   1 18  -33.4  0.342 -9.000 -9.000 -999.  481.    129.0  0.25   2.82   1.00    3.10
 81.    9.1  281.4    5.5
 11 01 01   1 19  -33.6  0.342 -9.000 -9.000 -999.  481.    128.9  0.25   2.82   1.00    3.10
 51.    9.1  279.9    5.5
 11 01 01   1 20  -23.6  0.239 -9.000 -9.000 -999.  287.     63.1  0.25   2.82   1.00    2.20
 77.    9.1  278.8    5.5
 11 01 01   1 21  -18.5  0.194 -9.000 -9.000 -999.  205.     41.2  0.25   2.82   1.00    1.80
 53.    9.1  277.5    5.5
 11 01 01   1 22  -23.7  0.239 -9.000 -9.000 -999.  281.     63.0  0.25   2.82   1.00    2.20
 58.    9.1  277.5    5.5
 11 01 01   1 23  -18.5  0.194 -9.000 -9.000 -999.  205.     41.2  0.25   2.82   1.00    1.80
 64.    9.1  277.5    5.5
 11 01 01   1 24   -4.5  0.094 -9.000 -9.000 -999.   74.     16.3  0.25   2.82   1.00    0.90
 52.    9.1  277.0    5.5


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 11 01 01 01    5.5 0 -999.  -99.00   276.5   99.0  -99.00  -99.00
 11 01 01 01    9.1 1   69.    1.80  -999.0   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                  ***       11:10:30

                      PAGE 236
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5 YEARS FOR
                   SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     VOL1        , L0000001    ,
                                  L0000002    , L0000003    , L0000004    ,
                L0000005    , L0000006    , L0000007    , L0000008    , L0000009    ,
                L0000010    , L0000011    , L0000012    ,
                L0000013    , L0000014    , L0000015    , L0000016    , L0000017    ,
```

L0000018 , L0000019 , L0000020 ,
L0000021 , L0000022 , L0000023 , L0000024 , L0000025 ,
L0000026 , L0000027 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
463378.96	3772828.26	0.02662	463378.69	3772793.02	0.03046
463386.40	3772775.13	0.03608	463386.40	3772739.34	0.03542
463446.69	3772649.04	0.03947	463521.85	3772649.59	0.05424
463733.28	3772861.02	0.05088	463734.68	3772804.07	0.05106
463733.22	3772710.63	0.02833	463733.95	3772593.84	0.00912
463613.62	3772559.94	0.01189	463577.42	3772560.70	0.01376
463661.63	3772875.07	0.08856	463661.63	3772854.12	0.10276
463447.10	3772589.66	0.02170	463445.63	3772439.14	0.00746
463438.27	3772414.27	0.00711	463474.28	3772439.93	0.00659
463519.03	3772441.72	0.00595	463552.85	3772441.32	0.00548
463391.53	3772427.40	0.00641	463401.67	3772414.67	0.00658
463377.80	3772436.35	0.00627	463384.58	3772595.15	0.01631
463384.20	3772515.88	0.00999	463609.49	3772441.03	0.00476
463632.07	3772444.33	0.00460	463664.01	3772442.13	0.00418
463683.83	3772440.75	0.00394	463710.26	3772441.03	0.00368
463732.56	3772441.58	0.00347	463762.57	3772441.85	0.00320
463796.99	3772440.75	0.00289	463536.81	3772423.68	0.00509
463439.62	3772386.24	0.00621	463609.77	3772390.37	0.00354
463566.54	3772406.89	0.00428	463008.94	3772845.41	0.00166
463009.09	3772819.82	0.00168	463008.80	3772793.95	0.00170
463008.66	3772766.50	0.00172	463008.94	3772744.36	0.00172
463008.94	3772721.80	0.00173	462951.59	3772791.94	0.00136
462972.58	3772845.26	0.00144	462949.58	3772767.93	0.00135
462952.89	3772743.36	0.00138	462950.88	3772718.35	0.00137
463190.81	3772849.27	0.00424	463190.46	3772814.75	0.00441
463163.43	3772704.78	0.00385	463163.05	3772674.67	0.00379
463168.77	3772530.60	0.00350	463169.15		

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        3772504.68        0.00339
        463002.51    3772905.19        0.00153                    463005.32
        3772955.99        0.00146
        463007.90    3773002.10        0.00137                    463344.51
        3772923.68        0.01020
        463094.00    3772923.21        0.00220                    463344.62
        3773184.91        0.00238
        463343.03    3772961.20        0.00794                    463344.09
        3773220.78        0.00203
        462927.81    3772926.91        0.00115                    462917.25
        3773075.16        0.00093
        462820.70    3772925.85        0.00084                    462945.74
        3772844.07        0.00130
        462919.89    3772843.02        0.00118                    463804.85
        3772951.49        0.02344
        464005.96    3772950.24        0.00945                    463491.39
        3773312.74        0.00188
        463542.29    3773312.12        0.00206                    463607.46
        3773313.36        0.00231
        463940.17    3772860.24        0.01252                    464302.66
        3772774.58        0.00247
        464302.04    3772504.57        0.00110                    463665.78
        3772387.21        0.00308
        463684.85    3772386.45        0.00295                    463712.67
        3772389.50        0.00281
        463767.19    3772382.64        0.00241                    463770.24
        3772407.80        0.00267
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:10:30

                      PAGE 237
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5 YEARS FOR
                   SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     VOL1        , L0000001    ,
                                  L0000002    , L0000003    , L0000004    ,
                 L0000005    , L0000006    , L0000007    , L0000008    , L0000009    ,
                 L0000010    , L0000011    , L0000012    ,
                 L0000013    , L0000014    , L0000015    , L0000016    , L0000017    ,
                 L0000018    , L0000019    , L0000020    ,
                 L0000021    , L0000022    , L0000023    , L0000024    , L0000025    ,
                 L0000026    , L0000027    ,  . . .      ,

                                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                      ** CONC OF DPM      IN
                                      MICROGRAMS/M**3                          **

      X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
      (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
        463838.09    3772443.25        0.00260                    463860.20
        3772441.35        0.00243
        463374.98    3772395.54        0.00508                    463377.09
        3772364.41        0.00445
        463439.87    3772363.59        0.00567                    463438.50
        3772343.81        0.00540
        463439.53    3772308.70        0.00476                    463439.87
        3772282.11        0.00439
        463438.50    3772230.64        0.00399                    463403.73
        3772244.28        0.00386
        463404.07    3772196.89        0.00353                    463404.76
```

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 5 YEARS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

GROUP ID	NETWORK	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.10276	AT (463661.63, 3772854.12, 374.24, 374.24, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.08856	AT (463661.63, 3772875.07, 374.90, 374.90, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.05424	AT (463521.85, 3772649.59, 372.77, 372.77, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.05106	AT (463734.68, 3772804.07, 372.59, 372.59, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.05088	AT (463733.28, 3772861.02, 374.00, 374.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.03947	AT (463446.69, 3772649.04, 372.42, 372.42, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.03608	AT (463386.40, 3772775.13, 374.63, 374.63, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.03542	AT (463386.40, 3772739.34, 374.00, 374.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.03046	AT (463378.69, 3772793.02, 375.00, 375.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.02833	AT (463733.22, 3772710.63, 371.00, 371.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

```
A Total of            0 Fatal Error Message(s)
A Total of            7 Warning Message(s)
A Total of          838 Informational Message(s)

A Total of        43848 Hours Were Processed

A Total of           40 Calm Hours Identified

A Total of          798 Missing Hours Identified (  1.82 Percent)


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
ME W186    3172       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
ME W187    3172       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
MX W438    8800        METQA: Convective Velocity Data Out-of-Range.  KURDAT =       12010216
MX W438   11536        METQA: Convective Velocity Data Out-of-Range.  KURDAT =       12042516
MX W420   16779        METQA: Wind Speed Out-of-Range.   KURDAT =                   12113003
MX W450   26305       CHKDAT: Record Out of Sequence in Meteorological File at:     15010101
MX W450   26305       CHKDAT: Record Out of Sequence in Meteorological File at:    1 year gap

   ***********************************
   *** AERMOD Finishes Successfully ***
   ***********************************
```

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 10.2.1
** Lakes Environmental Software Inc.
** Date: 1/4/2022
** File: C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst Rialto\14014 Ops\14014 Ops.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst Rialto\14014 Ops\14
   MODELOPT DFAULT CONC
   AVERTIME ANNUAL
   URBANOPT 2035210
   POLLUTID DPM
   FLAGPOLE 0.00
   RUNORNOT RUN
   ERRORFIL "14014 Ops.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Idling
** PREFIX
** Length of Side = 7.59
** Configuration = Adjacent
** Emission Rate = 5.161E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 463584.117, 3772860.589, 375.00, 3.49, 3.53
** 463585.950, 3772730.631, 372.92, 3.49, 3.53
** ------------------------------------------------------------------------
   LOCATION L0000382     VOLUME   463584.171 3772856.795 374.68
   LOCATION L0000383     VOLUME   463584.278 3772849.206 374.56
   LOCATION L0000384     VOLUME   463584.385 3772841.616 374.43
   LOCATION L0000385     VOLUME   463584.492 3772834.027 374.30
   LOCATION L0000386     VOLUME   463584.599 3772826.438 374.17
   LOCATION L0000387     VOLUME   463584.706 3772818.849 374.04
   LOCATION L0000388     VOLUME   463584.813 3772811.259 373.91
   LOCATION L0000389     VOLUME   463584.920 3772803.670 373.79
   LOCATION L0000390     VOLUME   463585.027 3772796.081 373.65
   LOCATION L0000391     VOLUME   463585.134 3772788.492 373.52
   LOCATION L0000392     VOLUME   463585.241 3772780.902 373.39
   LOCATION L0000393     VOLUME   463585.348 3772773.313 373.27
   LOCATION L0000394     VOLUME   463585.455 3772765.724 373.15
   LOCATION L0000395     VOLUME   463585.562 3772758.135 373.03
   LOCATION L0000396     VOLUME   463585.669 3772750.545 373.00
   LOCATION L0000397     VOLUME   463585.776 3772742.956 373.00
```

```
   LOCATION L0000398     VOLUME   463585.883 3772735.367 373.00
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC Onsite
** PREFIX
** Length of Side = 7.59
** Configuration = Adjacent
** Emission Rate = 1.792E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 5
** 463433.999, 3772835.931, 375.44, 3.49, 3.53
** 463448.161, 3772836.097, 375.09, 3.49, 3.53
** 463455.992, 3772865.921, 375.74, 3.49, 3.53
** 463608.276, 3772872.586, 374.90, 3.49, 3.53
** 463611.442, 3772686.478, 372.00, 3.49, 3.53
** ----------------------------------------------------------------
   LOCATION L0000450     VOLUME   463437.793 3772835.975 375.26
   LOCATION L0000451     VOLUME   463445.383 3772836.065 375.09
   LOCATION L0000452     VOLUME   463449.383 3772840.751 375.01
   LOCATION L0000453     VOLUME   463451.310 3772848.093 375.06
   LOCATION L0000454     VOLUME   463453.238 3772855.434 375.30
   LOCATION L0000455     VOLUME   463455.165 3772862.775 375.55
   LOCATION L0000456     VOLUME   463460.325 3772866.111 375.66
   LOCATION L0000457     VOLUME   463467.907 3772866.443 375.67
   LOCATION L0000458     VOLUME   463475.490 3772866.774 375.68
   LOCATION L0000459     VOLUME   463483.073 3772867.106 375.69
   LOCATION L0000460     VOLUME   463490.656 3772867.438 375.70
   LOCATION L0000461     VOLUME   463498.238 3772867.770 375.71
   LOCATION L0000462     VOLUME   463505.821 3772868.102 375.73
   LOCATION L0000463     VOLUME   463513.404 3772868.434 375.64
   LOCATION L0000464     VOLUME   463520.987 3772868.765 375.47
   LOCATION L0000465     VOLUME   463528.569 3772869.097 375.28
   LOCATION L0000466     VOLUME   463536.152 3772869.429 375.09
   LOCATION L0000467     VOLUME   463543.735 3772869.761 375.00
   LOCATION L0000468     VOLUME   463551.318 3772870.093 375.00
   LOCATION L0000469     VOLUME   463558.900 3772870.425 375.00
   LOCATION L0000470     VOLUME   463566.483 3772870.757 375.00
   LOCATION L0000471     VOLUME   463574.066 3772871.088 374.97
   LOCATION L0000472     VOLUME   463581.648 3772871.420 374.93
   LOCATION L0000473     VOLUME   463589.231 3772871.752 374.90
   LOCATION L0000474     VOLUME   463596.814 3772872.084 374.87
   LOCATION L0000475     VOLUME   463604.397 3772872.416 374.87
   LOCATION L0000476     VOLUME   463608.339 3772868.879 374.75
   LOCATION L0000477     VOLUME   463608.468 3772861.290 374.50
   LOCATION L0000478     VOLUME   463608.597 3772853.702 374.25
   LOCATION L0000479     VOLUME   463608.726 3772846.113 374.00
   LOCATION L0000480     VOLUME   463608.856 3772838.524 374.00
   LOCATION L0000481     VOLUME   463608.985 3772830.935 374.00
   LOCATION L0000482     VOLUME   463609.114 3772823.346 374.00
   LOCATION L0000483     VOLUME   463609.243 3772815.757 373.98
   LOCATION L0000484     VOLUME   463609.372 3772808.168 373.73
   LOCATION L0000485     VOLUME   463609.501 3772800.579 373.47
   LOCATION L0000486     VOLUME   463609.630 3772792.990 373.22
   LOCATION L0000487     VOLUME   463609.759 3772785.401 373.00
   LOCATION L0000488     VOLUME   463609.888 3772777.813 373.00
   LOCATION L0000489     VOLUME   463610.017 3772770.224 373.00
   LOCATION L0000490     VOLUME   463610.146 3772762.635 373.00
   LOCATION L0000491     VOLUME   463610.276 3772755.046 372.98
   LOCATION L0000492     VOLUME   463610.405 3772747.457 372.89
   LOCATION L0000493     VOLUME   463610.534 3772739.868 372.80
   LOCATION L0000494     VOLUME   463610.663 3772732.279 372.71
   LOCATION L0000495     VOLUME   463610.792 3772724.690 372.59
   LOCATION L0000496     VOLUME   463610.921 3772717.101 372.43
```

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   LOCATION L0000497     VOLUME   463611.050 3772709.512 372.27
   LOCATION L0000498     VOLUME   463611.179 3772701.923 372.11
   LOCATION L0000499     VOLUME   463611.308 3772694.335 371.97
   LOCATION L0000500     VOLUME   463611.437 3772686.746 371.87
** End of LINE VOLUME Source ID = SLINE2
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Cedar S 75%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 1.181E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 10
** 463422.027, 3772677.396, 372.95, 3.49, 6.51
** 463422.344, 3772248.943, 365.99, 3.49, 6.51
** 463421.217, 3771935.376, 361.64, 3.49, 6.51
** 463420.842, 3771517.037, 355.00, 3.49, 6.51
** 463419.715, 3771102.077, 349.00, 3.49, 6.51
** 463420.090, 3770613.138, 341.61, 3.49, 6.51
** 463418.964, 3770281.170, 338.00, 3.49, 6.51
** 463430.981, 3770189.917, 336.35, 3.49, 6.51
** 463449.006, 3770054.351, 335.00, 3.49, 6.51
** 463451.259, 3769793.733, 340.67, 3.49, 6.51
** ----------------------------------------------------------------------
   LOCATION L0000707     VOLUME   463422.032 3772670.396 373.00
   LOCATION L0000708     VOLUME   463422.043 3772656.396 372.67
   LOCATION L0000709     VOLUME   463422.053 3772642.396 372.20
   LOCATION L0000710     VOLUME   463422.063 3772628.396 372.00
   LOCATION L0000711     VOLUME   463422.074 3772614.396 372.00
   LOCATION L0000712     VOLUME   463422.084 3772600.396 371.82
   LOCATION L0000713     VOLUME   463422.094 3772586.396 371.39
   LOCATION L0000714     VOLUME   463422.105 3772572.396 371.07
   LOCATION L0000715     VOLUME   463422.115 3772558.396 371.03
   LOCATION L0000716     VOLUME   463422.125 3772544.396 371.00
   LOCATION L0000717     VOLUME   463422.136 3772530.396 371.00
   LOCATION L0000718     VOLUME   463422.146 3772516.396 371.00
   LOCATION L0000719     VOLUME   463422.156 3772502.396 370.54
   LOCATION L0000720     VOLUME   463422.167 3772488.396 370.07
   LOCATION L0000721     VOLUME   463422.177 3772474.396 369.97
   LOCATION L0000722     VOLUME   463422.187 3772460.396 369.93
   LOCATION L0000723     VOLUME   463422.198 3772446.396 369.61
   LOCATION L0000724     VOLUME   463422.208 3772432.396 369.18
   LOCATION L0000725     VOLUME   463422.218 3772418.396 368.74
   LOCATION L0000726     VOLUME   463422.229 3772404.396 368.27
   LOCATION L0000727     VOLUME   463422.239 3772390.396 368.00
   LOCATION L0000728     VOLUME   463422.249 3772376.397 368.00
   LOCATION L0000729     VOLUME   463422.260 3772362.397 367.87
   LOCATION L0000730     VOLUME   463422.270 3772348.397 367.40
   LOCATION L0000731     VOLUME   463422.281 3772334.397 367.00
   LOCATION L0000732     VOLUME   463422.291 3772320.397 367.00
   LOCATION L0000733     VOLUME   463422.301 3772306.397 367.00
   LOCATION L0000734     VOLUME   463422.312 3772292.397 366.54
   LOCATION L0000735     VOLUME   463422.322 3772278.397 366.07
   LOCATION L0000736     VOLUME   463422.332 3772264.397 366.00
   LOCATION L0000737     VOLUME   463422.343 3772250.397 366.00
   LOCATION L0000738     VOLUME   463422.299 3772236.397 365.67
   LOCATION L0000739     VOLUME   463422.248 3772222.397 365.20
   LOCATION L0000740     VOLUME   463422.198 3772208.397 365.00
   LOCATION L0000741     VOLUME   463422.148 3772194.397 365.00
   LOCATION L0000742     VOLUME   463422.097 3772180.397 364.98
   LOCATION L0000743     VOLUME   463422.047 3772166.397 364.95
   LOCATION L0000744     VOLUME   463421.997 3772152.397 364.80
   LOCATION L0000745     VOLUME   463421.946 3772138.397 364.37
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LOCATION L0000746 VOLUME 463421.896 3772124.397 364.00
LOCATION L0000747 VOLUME 463421.846 3772110.397 364.00
LOCATION L0000748 VOLUME 463421.796 3772096.398 364.00
LOCATION L0000749 VOLUME 463421.745 3772082.398 363.54
LOCATION L0000750 VOLUME 463421.695 3772068.398 363.07
LOCATION L0000751 VOLUME 463421.645 3772054.398 363.00
LOCATION L0000752 VOLUME 463421.594 3772040.398 363.00
LOCATION L0000753 VOLUME 463421.544 3772026.398 362.67
LOCATION L0000754 VOLUME 463421.494 3772012.398 362.20
LOCATION L0000755 VOLUME 463421.443 3771998.398 362.00
LOCATION L0000756 VOLUME 463421.393 3771984.398 362.00
LOCATION L0000757 VOLUME 463421.343 3771970.398 361.99
LOCATION L0000758 VOLUME 463421.293 3771956.398 361.96
LOCATION L0000759 VOLUME 463421.242 3771942.399 361.82
LOCATION L0000760 VOLUME 463421.211 3771928.399 361.38
LOCATION L0000761 VOLUME 463421.198 3771914.399 361.00
LOCATION L0000762 VOLUME 463421.186 3771900.399 361.00
LOCATION L0000763 VOLUME 463421.173 3771886.399 361.00
LOCATION L0000764 VOLUME 463421.161 3771872.399 360.54
LOCATION L0000765 VOLUME 463421.148 3771858.399 360.07
LOCATION L0000766 VOLUME 463421.135 3771844.399 360.00
LOCATION L0000767 VOLUME 463421.123 3771830.399 360.00
LOCATION L0000768 VOLUME 463421.110 3771816.399 359.67
LOCATION L0000769 VOLUME 463421.098 3771802.399 359.20
LOCATION L0000770 VOLUME 463421.085 3771788.399 359.00
LOCATION L0000771 VOLUME 463421.073 3771774.399 359.00
LOCATION L0000772 VOLUME 463421.060 3771760.399 358.80
LOCATION L0000773 VOLUME 463421.047 3771746.399 358.34
LOCATION L0000774 VOLUME 463421.035 3771732.399 358.00
LOCATION L0000775 VOLUME 463421.022 3771718.399 358.00
LOCATION L0000776 VOLUME 463421.010 3771704.399 358.00
LOCATION L0000777 VOLUME 463420.997 3771690.399 357.98
LOCATION L0000778 VOLUME 463420.985 3771676.399 357.96
LOCATION L0000779 VOLUME 463420.972 3771662.399 357.51
LOCATION L0000780 VOLUME 463420.959 3771648.399 357.07
LOCATION L0000781 VOLUME 463420.947 3771634.399 357.00
LOCATION L0000782 VOLUME 463420.934 3771620.399 357.00
LOCATION L0000783 VOLUME 463420.922 3771606.399 356.67
LOCATION L0000784 VOLUME 463420.909 3771592.399 356.20
LOCATION L0000785 VOLUME 463420.897 3771578.399 356.00
LOCATION L0000786 VOLUME 463420.884 3771564.399 356.00
LOCATION L0000787 VOLUME 463420.871 3771550.399 355.80
LOCATION L0000788 VOLUME 463420.859 3771536.399 355.34
LOCATION L0000789 VOLUME 463420.846 3771522.399 355.00
LOCATION L0000790 VOLUME 463420.818 3771508.399 355.00
LOCATION L0000791 VOLUME 463420.780 3771494.399 354.94
LOCATION L0000792 VOLUME 463420.742 3771480.399 354.47
LOCATION L0000793 VOLUME 463420.704 3771466.399 354.00
LOCATION L0000794 VOLUME 463420.666 3771452.399 354.00
LOCATION L0000795 VOLUME 463420.628 3771438.399 354.00
LOCATION L0000796 VOLUME 463420.590 3771424.399 353.99
LOCATION L0000797 VOLUME 463420.552 3771410.399 353.97
LOCATION L0000798 VOLUME 463420.514 3771396.399 353.65
LOCATION L0000799 VOLUME 463420.476 3771382.399 353.20
LOCATION L0000800 VOLUME 463420.438 3771368.399 353.00
LOCATION L0000801 VOLUME 463420.400 3771354.399 353.00
LOCATION L0000802 VOLUME 463420.362 3771340.399 352.80
LOCATION L0000803 VOLUME 463420.324 3771326.399 352.34
LOCATION L0000804 VOLUME 463420.286 3771312.399 352.00
LOCATION L0000805 VOLUME 463420.248 3771298.400 352.00
LOCATION L0000806 VOLUME 463420.210 3771284.400 351.94
LOCATION L0000807 VOLUME 463420.172 3771270.400 351.47
LOCATION L0000808 VOLUME 463420.134 3771256.400 351.00
LOCATION L0000809 VOLUME 463420.096 3771242.400 351.00
LOCATION L0000810 VOLUME 463420.058 3771228.400 351.00
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LOCATION L0000813 VOLUME 463419.944 3771186.400 350.00
LOCATION L0000814 VOLUME 463419.906 3771172.400 350.00
LOCATION L0000815 VOLUME 463419.868 3771158.400 350.00
LOCATION L0000816 VOLUME 463419.830 3771144.400 350.00
LOCATION L0000817 VOLUME 463419.792 3771130.400 349.80
LOCATION L0000818 VOLUME 463419.754 3771116.400 349.33
LOCATION L0000819 VOLUME 463419.716 3771102.400 349.00
LOCATION L0000820 VOLUME 463419.725 3771088.400 349.00
LOCATION L0000821 VOLUME 463419.736 3771074.400 348.94
LOCATION L0000822 VOLUME 463419.747 3771060.400 348.47
LOCATION L0000823 VOLUME 463419.758 3771046.400 348.00
LOCATION L0000824 VOLUME 463419.768 3771032.400 348.00
LOCATION L0000825 VOLUME 463419.779 3771018.400 348.00
LOCATION L0000826 VOLUME 463419.790 3771004.400 347.60
LOCATION L0000827 VOLUME 463419.801 3770990.400 347.14
LOCATION L0000828 VOLUME 463419.811 3770976.400 347.00
LOCATION L0000829 VOLUME 463419.822 3770962.400 347.00
LOCATION L0000830 VOLUME 463419.833 3770948.400 347.00
LOCATION L0000831 VOLUME 463419.844 3770934.400 347.00
LOCATION L0000832 VOLUME 463419.854 3770920.400 346.80
LOCATION L0000833 VOLUME 463419.865 3770906.400 346.34
LOCATION L0000834 VOLUME 463419.876 3770892.400 346.00
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LOCATION L0000837 VOLUME 463419.908 3770850.400 345.47
LOCATION L0000838 VOLUME 463419.919 3770836.400 345.01
LOCATION L0000839 VOLUME 463419.930 3770822.400 345.00
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LOCATION L0000841 VOLUME 463419.951 3770794.400 344.60
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LOCATION L0000843 VOLUME 463419.973 3770766.400 344.00
LOCATION L0000844 VOLUME 463419.983 3770752.400 344.00
LOCATION L0000845 VOLUME 463419.994 3770738.400 343.74
LOCATION L0000846 VOLUME 463420.005 3770724.400 343.27
LOCATION L0000847 VOLUME 463420.016 3770710.400 343.00
LOCATION L0000848 VOLUME 463420.027 3770696.400 343.00
LOCATION L0000849 VOLUME 463420.037 3770682.400 342.87
LOCATION L0000850 VOLUME 463420.048 3770668.400 342.40
LOCATION L0000851 VOLUME 463420.059 3770654.400 342.00
LOCATION L0000852 VOLUME 463420.070 3770640.400 342.00
LOCATION L0000853 VOLUME 463420.080 3770626.400 342.00
LOCATION L0000854 VOLUME 463420.088 3770612.400 341.54
LOCATION L0000855 VOLUME 463420.040 3770598.400 341.07
LOCATION L0000856 VOLUME 463419.993 3770584.401 341.00
LOCATION L0000857 VOLUME 463419.945 3770570.401 341.00
LOCATION L0000858 VOLUME 463419.898 3770556.401 341.00
LOCATION L0000859 VOLUME 463419.850 3770542.401 341.00
LOCATION L0000860 VOLUME 463419.803 3770528.401 340.74
LOCATION L0000861 VOLUME 463419.755 3770514.401 340.27
LOCATION L0000862 VOLUME 463419.708 3770500.401 340.00
LOCATION L0000863 VOLUME 463419.660 3770486.401 340.00
LOCATION L0000864 VOLUME 463419.613 3770472.401 340.00
LOCATION L0000865 VOLUME 463419.565 3770458.401 340.00
LOCATION L0000866 VOLUME 463419.518 3770444.401 340.00
LOCATION L0000867 VOLUME 463419.470 3770430.401 340.00
LOCATION L0000868 VOLUME 463419.423 3770416.402 340.00
LOCATION L0000869 VOLUME 463419.375 3770402.402 339.54
LOCATION L0000870 VOLUME 463419.328 3770388.402 339.07
LOCATION L0000871 VOLUME 463419.280 3770374.402 339.00
LOCATION L0000872 VOLUME 463419.233 3770360.402 339.00
LOCATION L0000873 VOLUME 463419.185 3770346.402 339.00
LOCATION L0000874 VOLUME 463419.138 3770332.402 339.00
LOCATION L0000875 VOLUME 463419.090 3770318.402 338.74
LOCATION L0000876 VOLUME 463419.043 3770304.402 338.27
LOCATION L0000877 VOLUME 463418.995 3770290.402 338.00

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   LOCATION L0000878     VOLUME   463419.586 3770276.443 338.00
   LOCATION L0000879     VOLUME   463421.414 3770262.563 337.82
   LOCATION L0000880     VOLUME   463423.242 3770248.683 337.36
   LOCATION L0000881     VOLUME   463425.070 3770234.803 336.99
   LOCATION L0000882     VOLUME   463426.898 3770220.922 336.88
   LOCATION L0000883     VOLUME   463428.726 3770207.042 336.70
   LOCATION L0000884     VOLUME   463430.553 3770193.162 336.36
   LOCATION L0000885     VOLUME   463432.395 3770179.284 336.06
   LOCATION L0000886     VOLUME   463434.240 3770165.406 336.00
   LOCATION L0000887     VOLUME   463436.085 3770151.528 336.00
   LOCATION L0000888     VOLUME   463437.930 3770137.650 335.82
   LOCATION L0000889     VOLUME   463439.776 3770123.772 335.50
   LOCATION L0000890     VOLUME   463441.621 3770109.894 335.21
   LOCATION L0000891     VOLUME   463443.466 3770096.017 335.07
   LOCATION L0000892     VOLUME   463445.311 3770082.139 335.00
   LOCATION L0000893     VOLUME   463447.157 3770068.261 335.00
   LOCATION L0000894     VOLUME   463449.002 3770054.383 335.00
   LOCATION L0000895     VOLUME   463449.127 3770040.384 335.00
   LOCATION L0000896     VOLUME   463449.248 3770026.384 335.00
   LOCATION L0000897     VOLUME   463449.369 3770012.385 335.00
   LOCATION L0000898     VOLUME   463449.490 3769998.385 335.00
   LOCATION L0000899     VOLUME   463449.611 3769984.386 335.00
   LOCATION L0000900     VOLUME   463449.732 3769970.386 335.00
   LOCATION L0000901     VOLUME   463449.853 3769956.387 335.00
   LOCATION L0000902     VOLUME   463449.974 3769942.387 335.00
   LOCATION L0000903     VOLUME   463450.095 3769928.388 335.00
   LOCATION L0000904     VOLUME   463450.216 3769914.388 335.00
   LOCATION L0000905     VOLUME   463450.337 3769900.389 335.00
   LOCATION L0000906     VOLUME   463450.458 3769886.390 335.00
   LOCATION L0000907     VOLUME   463450.579 3769872.390 335.00
   LOCATION L0000908     VOLUME   463450.700 3769858.391 335.00
   LOCATION L0000909     VOLUME   463450.821 3769844.391 335.19
   LOCATION L0000910     VOLUME   463450.942 3769830.392 336.57
   LOCATION L0000911     VOLUME   463451.063 3769816.392 337.95
   LOCATION L0000912     VOLUME   463451.185 3769802.393 339.27
** End of LINE VOLUME Source ID = SLINE3
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Cedar N 25%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 2.319E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 463423.043, 3772836.616, 375.68, 3.49, 6.51
** 463423.418, 3773261.378, 382.04, 3.49, 6.51
** ----------------------------------------------------------------------
   LOCATION L0000943     VOLUME   463423.049 3772843.616 375.81
   LOCATION L0000944     VOLUME   463423.061 3772857.616 375.93
   LOCATION L0000945     VOLUME   463423.074 3772871.616 375.98
   LOCATION L0000946     VOLUME   463423.086 3772885.616 376.27
   LOCATION L0000947     VOLUME   463423.098 3772899.616 376.69
   LOCATION L0000948     VOLUME   463423.111 3772913.616 376.91
   LOCATION L0000949     VOLUME   463423.123 3772927.616 376.97
   LOCATION L0000950     VOLUME   463423.136 3772941.616 377.16
   LOCATION L0000951     VOLUME   463423.148 3772955.616 377.57
   LOCATION L0000952     VOLUME   463423.160 3772969.616 377.90
   LOCATION L0000953     VOLUME   463423.173 3772983.616 377.95
   LOCATION L0000954     VOLUME   463423.185 3772997.616 378.04
   LOCATION L0000955     VOLUME   463423.197 3773011.616 378.45
   LOCATION L0000956     VOLUME   463423.210 3773025.616 378.86
   LOCATION L0000957     VOLUME   463423.222 3773039.616 378.93
   LOCATION L0000958     VOLUME   463423.235 3773053.616 378.99
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   LOCATION L0000959     VOLUME   463423.247 3773067.616 379.00
   LOCATION L0000960     VOLUME   463423.259 3773081.616 379.00
   LOCATION L0000961     VOLUME   463423.272 3773095.616 379.31
   LOCATION L0000962     VOLUME   463423.284 3773109.616 379.78
   LOCATION L0000963     VOLUME   463423.296 3773123.616 380.00
   LOCATION L0000964     VOLUME   463423.309 3773137.616 380.00
   LOCATION L0000965     VOLUME   463423.321 3773151.616 380.18
   LOCATION L0000966     VOLUME   463423.334 3773165.616 380.64
   LOCATION L0000967     VOLUME   463423.346 3773179.616 381.00
   LOCATION L0000968     VOLUME   463423.358 3773193.616 381.00
   LOCATION L0000969     VOLUME   463423.371 3773207.616 381.04
   LOCATION L0000970     VOLUME   463423.383 3773221.616 381.51
   LOCATION L0000971     VOLUME   463423.396 3773235.616 381.98
   LOCATION L0000972     VOLUME   463423.408 3773249.616 382.00
** End of LINE VOLUME Source ID = SLINE4
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC Cedar 45%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 1.558E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 463422.651, 3772836.080, 375.66, 3.49, 6.51
** 463422.063, 3772677.476, 372.95, 3.49, 6.51
** ----------------------------------------------------------------------
   LOCATION L0000984     VOLUME   463422.625 3772829.080 375.38
   LOCATION L0000985     VOLUME   463422.573 3772815.080 375.00
   LOCATION L0000986     VOLUME   463422.521 3772801.081 374.95
   LOCATION L0000987     VOLUME   463422.469 3772787.081 374.91
   LOCATION L0000988     VOLUME   463422.417 3772773.081 374.51
   LOCATION L0000989     VOLUME   463422.365 3772759.081 374.08
   LOCATION L0000990     VOLUME   463422.313 3772745.081 374.00
   LOCATION L0000991     VOLUME   463422.261 3772731.081 374.00
   LOCATION L0000992     VOLUME   463422.209 3772717.081 373.69
   LOCATION L0000993     VOLUME   463422.157 3772703.081 373.22
   LOCATION L0000994     VOLUME   463422.106 3772689.081 373.00
** End of LINE VOLUME Source ID = SLINE5
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC Durst 80%
** PREFIX
** Length of Side = 7.59
** Configuration = Adjacent
** Emission Rate = 3.099E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 463612.231, 3772678.260, 371.68, 3.49, 3.53
** 463434.806, 3772676.691, 372.92, 3.49, 3.53
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   LOCATION L0001018     VOLUME   463608.437 3772678.226 371.82
   LOCATION L0001019     VOLUME   463600.847 3772678.159 371.98
   LOCATION L0001020     VOLUME   463593.257 3772678.092 372.00
   LOCATION L0001021     VOLUME   463585.667 3772678.025 372.00
   LOCATION L0001022     VOLUME   463578.078 3772677.958 372.00
   LOCATION L0001023     VOLUME   463570.488 3772677.891 372.00
   LOCATION L0001024     VOLUME   463562.898 3772677.824 372.23
   LOCATION L0001025     VOLUME   463555.309 3772677.757 372.48
   LOCATION L0001026     VOLUME   463547.719 3772677.689 372.73
   LOCATION L0001027     VOLUME   463540.129 3772677.622 372.98
   LOCATION L0001028     VOLUME   463532.540 3772677.555 373.00
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   LOCATION L0001029     VOLUME   463524.950 3772677.488 373.00
   LOCATION L0001030     VOLUME   463517.360 3772677.421 373.00
   LOCATION L0001031     VOLUME   463509.770 3772677.354 373.00
   LOCATION L0001032     VOLUME   463502.181 3772677.287 373.00
   LOCATION L0001033     VOLUME   463494.591 3772677.220 373.00
   LOCATION L0001034     VOLUME   463487.001 3772677.153 373.00
   LOCATION L0001035     VOLUME   463479.412 3772677.086 373.00
   LOCATION L0001036     VOLUME   463471.822 3772677.019 373.00
   LOCATION L0001037     VOLUME   463464.232 3772676.951 373.00
   LOCATION L0001038     VOLUME   463456.642 3772676.884 373.00
   LOCATION L0001039     VOLUME   463449.053 3772676.817 373.00
   LOCATION L0001040     VOLUME   463441.463 3772676.750 373.00
** End of LINE VOLUME Source ID = SLINE6
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0000382     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000383     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000384     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000385     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000386     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000387     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000388     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000389     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000390     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000391     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000392     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000393     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000394     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000395     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000396     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000397     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000398     0.0000003036      3.49      3.53      3.25
** ----------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0000450     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000451     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000452     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000453     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000454     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000455     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000456     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000457     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000458     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000459     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000460     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000461     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000462     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000463     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000464     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000465     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000466     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000467     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000468     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000469     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000470     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000471     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000472     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000473     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000474     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000475     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000476     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000477     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000478     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000479     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000480     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000481     0.00000003514      3.49      3.53      3.25
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   SRCPARAM L0000482     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000483     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000484     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000485     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000486     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000487     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000488     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000489     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000490     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000491     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000492     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000493     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000494     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000495     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000496     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000497     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000498     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000499     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000500     0.00000003514      3.49      3.53      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0000707     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000708     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000709     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000710     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000711     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000712     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000713     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000714     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000715     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000716     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000717     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000718     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000719     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000720     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000721     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000722     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000723     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000724     0.000000005733      3.49      6.51      3.25
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   SRCPARAM L0000726     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000727     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000728     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000729     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000730     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000731     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000732     0.000000005733      3.49      6.51      3.25
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   SRCPARAM L0000735     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000736     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000737     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000738     0.000000005733      3.49      6.51      3.25
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   SRCPARAM L0000742     0.000000005733      3.49      6.51      3.25
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   SRCPARAM L0000749     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000750     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000751     0.000000005733      3.49      6.51      3.25
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SRCPARAM L0000804     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000805     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000806     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000807     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000808     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000809     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000810     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000811     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000812     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000813     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000814     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000815     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000816     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000817     0.000000005733      3.49      6.51      3.25
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SRCPARAM L0000818     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000819     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000820     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000821     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000822     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000823     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000824     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000825     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000826     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000827     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000828     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000829     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000830     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000831     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000832     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000833     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000834     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000835     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000836     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000837     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000838     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000839     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000840     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000841     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000842     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000843     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000844     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000845     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000846     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000847     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000848     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000849     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000850     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000851     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000852     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000853     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000854     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000855     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000856     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000857     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000858     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000859     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000860     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000861     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000862     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000863     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000864     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000865     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000866     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000867     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000868     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000869     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000870     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000871     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000872     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000873     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000874     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000875     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000876     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000877     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000878     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000879     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000880     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000881     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000882     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000883     0.000000005733      3.49      6.51      3.25
```

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   SRCPARAM L0000884     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000885     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000886     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000887     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000888     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000889     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000890     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000891     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000892     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000893     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000894     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000895     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000896     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000897     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000898     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000899     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000900     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000901     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000902     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000903     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000904     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000905     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000906     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000907     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000908     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000909     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000910     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000911     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000912     0.000000005733      3.49      6.51      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0000943     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000944     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000945     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000946     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000947     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000948     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000949     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000950     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000951     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000952     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000953     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000954     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000955     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000956     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000957     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000958     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000959     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000960     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000961     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000962     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000963     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000964     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000965     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000966     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000967     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000968     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000969     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000970     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000971     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000972     0.00000000773      3.49      6.51      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE5
   SRCPARAM L0000984     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000985     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000986     0.00000001416      3.49      6.51      3.25
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   SRCPARAM L0000987     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000988     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000989     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000990     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000991     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000992     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000993     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000994     0.00000001416      3.49      6.51      3.25
** ----------------------------------------------------------------
** LINE VOLUME Source ID = SLINE6
   SRCPARAM L0001018     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001019     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001020     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001021     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001022     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001023     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001024     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001025     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001026     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001027     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001028     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001029     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001030     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001031     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001032     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001033     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001034     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001035     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001036     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001037     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001038     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001039     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001040     0.00000001347      3.49      3.53      3.25
** ----------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED "14014 Ops.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE FONT_V9_ADJU\FONT_v9.SFC
   PROFFILE FONT_V9_ADJU\FONT_v9.PFL
   SURFDATA 3102 2011
   UAIRDATA 3190 2011
   SITEDATA 99999 2011
   PROFBASE 367.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
```

```
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL "14014 Ops.AD\AN00GALL.PLT" 31
   SUMMFILE "14014 Ops.sum"
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    World Geodetic System 1984
** DTMRGN   Global Definition
** UNITS    m
** ZONE     11
** ZONEINX  0
**
```

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 10.2.1
** Lakes Environmental Software Inc.
** Date: 1/4/2022
** File: C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst Rialto\14014 Ops\14014 Ops.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst Rialto\14014 Ops\14
   MODELOPT DFAULT CONC
   AVERTIME ANNUAL
   URBANOPT 2035210
   POLLUTID DPM
   FLAGPOLE 0.00
   RUNORNOT RUN
   ERRORFIL "14014 Ops.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Idling
** PREFIX
** Length of Side = 7.59
** Configuration = Adjacent
** Emission Rate = 5.161E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 463584.117, 3772860.589, 375.00, 3.49, 3.53
** 463585.950, 3772730.631, 372.92, 3.49, 3.53
** ------------------------------------------------------------------------
   LOCATION L0000382     VOLUME   463584.171 3772856.795 374.68
   LOCATION L0000383     VOLUME   463584.278 3772849.206 374.56
   LOCATION L0000384     VOLUME   463584.385 3772841.616 374.43
   LOCATION L0000385     VOLUME   463584.492 3772834.027 374.30
   LOCATION L0000386     VOLUME   463584.599 3772826.438 374.17
   LOCATION L0000387     VOLUME   463584.706 3772818.849 374.04
   LOCATION L0000388     VOLUME   463584.813 3772811.259 373.91
   LOCATION L0000389     VOLUME   463584.920 3772803.670 373.79
   LOCATION L0000390     VOLUME   463585.027 3772796.081 373.65
   LOCATION L0000391     VOLUME   463585.134 3772788.492 373.52
   LOCATION L0000392     VOLUME   463585.241 3772780.902 373.39
   LOCATION L0000393     VOLUME   463585.348 3772773.313 373.27
   LOCATION L0000394     VOLUME   463585.455 3772765.724 373.15
   LOCATION L0000395     VOLUME   463585.562 3772758.135 373.03
   LOCATION L0000396     VOLUME   463585.669 3772750.545 373.00
   LOCATION L0000397     VOLUME   463585.776 3772742.956 373.00
```

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   LOCATION L0000398     VOLUME   463585.883 3772735.367 373.00
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC Onsite
** PREFIX
** Length of Side = 7.59
** Configuration = Adjacent
** Emission Rate = 1.792E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 5
** 463433.999, 3772835.931, 375.44, 3.49, 3.53
** 463448.161, 3772836.097, 375.09, 3.49, 3.53
** 463455.992, 3772865.921, 375.74, 3.49, 3.53
** 463608.276, 3772872.586, 374.90, 3.49, 3.53
** 463611.442, 3772686.478, 372.00, 3.49, 3.53
** ----------------------------------------------------------------
   LOCATION L0000450     VOLUME   463437.793 3772835.975 375.26
   LOCATION L0000451     VOLUME   463445.383 3772836.065 375.09
   LOCATION L0000452     VOLUME   463449.383 3772840.751 375.01
   LOCATION L0000453     VOLUME   463451.310 3772848.093 375.06
   LOCATION L0000454     VOLUME   463453.238 3772855.434 375.30
   LOCATION L0000455     VOLUME   463455.165 3772862.775 375.55
   LOCATION L0000456     VOLUME   463460.325 3772866.111 375.66
   LOCATION L0000457     VOLUME   463467.907 3772866.443 375.67
   LOCATION L0000458     VOLUME   463475.490 3772866.774 375.68
   LOCATION L0000459     VOLUME   463483.073 3772867.106 375.69
   LOCATION L0000460     VOLUME   463490.656 3772867.438 375.70
   LOCATION L0000461     VOLUME   463498.238 3772867.770 375.71
   LOCATION L0000462     VOLUME   463505.821 3772868.102 375.73
   LOCATION L0000463     VOLUME   463513.404 3772868.434 375.64
   LOCATION L0000464     VOLUME   463520.987 3772868.765 375.47
   LOCATION L0000465     VOLUME   463528.569 3772869.097 375.28
   LOCATION L0000466     VOLUME   463536.152 3772869.429 375.09
   LOCATION L0000467     VOLUME   463543.735 3772869.761 375.00
   LOCATION L0000468     VOLUME   463551.318 3772870.093 375.00
   LOCATION L0000469     VOLUME   463558.900 3772870.425 375.00
   LOCATION L0000470     VOLUME   463566.483 3772870.757 375.00
   LOCATION L0000471     VOLUME   463574.066 3772871.088 374.97
   LOCATION L0000472     VOLUME   463581.648 3772871.420 374.93
   LOCATION L0000473     VOLUME   463589.231 3772871.752 374.90
   LOCATION L0000474     VOLUME   463596.814 3772872.084 374.87
   LOCATION L0000475     VOLUME   463604.397 3772872.416 374.87
   LOCATION L0000476     VOLUME   463608.339 3772868.879 374.75
   LOCATION L0000477     VOLUME   463608.468 3772861.290 374.50
   LOCATION L0000478     VOLUME   463608.597 3772853.702 374.25
   LOCATION L0000479     VOLUME   463608.726 3772846.113 374.00
   LOCATION L0000480     VOLUME   463608.856 3772838.524 374.00
   LOCATION L0000481     VOLUME   463608.985 3772830.935 374.00
   LOCATION L0000482     VOLUME   463609.114 3772823.346 374.00
   LOCATION L0000483     VOLUME   463609.243 3772815.757 373.98
   LOCATION L0000484     VOLUME   463609.372 3772808.168 373.73
   LOCATION L0000485     VOLUME   463609.501 3772800.579 373.47
   LOCATION L0000486     VOLUME   463609.630 3772792.990 373.22
   LOCATION L0000487     VOLUME   463609.759 3772785.401 373.00
   LOCATION L0000488     VOLUME   463609.888 3772777.813 373.00
   LOCATION L0000489     VOLUME   463610.017 3772770.224 373.00
   LOCATION L0000490     VOLUME   463610.146 3772762.635 373.00
   LOCATION L0000491     VOLUME   463610.276 3772755.046 372.98
   LOCATION L0000492     VOLUME   463610.405 3772747.457 372.89
   LOCATION L0000493     VOLUME   463610.534 3772739.868 372.80
   LOCATION L0000494     VOLUME   463610.663 3772732.279 372.71
   LOCATION L0000495     VOLUME   463610.792 3772724.690 372.59
   LOCATION L0000496     VOLUME   463610.921 3772717.101 372.43
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   LOCATION L0000497     VOLUME   463611.050 3772709.512 372.27
   LOCATION L0000498     VOLUME   463611.179 3772701.923 372.11
   LOCATION L0000499     VOLUME   463611.308 3772694.335 371.97
   LOCATION L0000500     VOLUME   463611.437 3772686.746 371.87
** End of LINE VOLUME Source ID = SLINE2
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Cedar S 75%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 1.181E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 10
** 463422.027, 3772677.396, 372.95, 3.49, 6.51
** 463422.344, 3772248.943, 365.99, 3.49, 6.51
** 463421.217, 3771935.376, 361.64, 3.49, 6.51
** 463420.842, 3771517.037, 355.00, 3.49, 6.51
** 463419.715, 3771102.077, 349.00, 3.49, 6.51
** 463420.090, 3770613.138, 341.61, 3.49, 6.51
** 463418.964, 3770281.170, 338.00, 3.49, 6.51
** 463430.981, 3770189.917, 336.35, 3.49, 6.51
** 463449.006, 3770054.351, 335.00, 3.49, 6.51
** 463451.259, 3769793.733, 340.67, 3.49, 6.51
** ----------------------------------------------------------------------
   LOCATION L0000707     VOLUME   463422.032 3772670.396 373.00
   LOCATION L0000708     VOLUME   463422.043 3772656.396 372.67
   LOCATION L0000709     VOLUME   463422.053 3772642.396 372.20
   LOCATION L0000710     VOLUME   463422.063 3772628.396 372.00
   LOCATION L0000711     VOLUME   463422.074 3772614.396 372.00
   LOCATION L0000712     VOLUME   463422.084 3772600.396 371.82
   LOCATION L0000713     VOLUME   463422.094 3772586.396 371.39
   LOCATION L0000714     VOLUME   463422.105 3772572.396 371.07
   LOCATION L0000715     VOLUME   463422.115 3772558.396 371.03
   LOCATION L0000716     VOLUME   463422.125 3772544.396 371.00
   LOCATION L0000717     VOLUME   463422.136 3772530.396 371.00
   LOCATION L0000718     VOLUME   463422.146 3772516.396 371.00
   LOCATION L0000719     VOLUME   463422.156 3772502.396 370.54
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   LOCATION L0000721     VOLUME   463422.177 3772474.396 369.97
   LOCATION L0000722     VOLUME   463422.187 3772460.396 369.93
   LOCATION L0000723     VOLUME   463422.198 3772446.396 369.61
   LOCATION L0000724     VOLUME   463422.208 3772432.396 369.18
   LOCATION L0000725     VOLUME   463422.218 3772418.396 368.74
   LOCATION L0000726     VOLUME   463422.229 3772404.396 368.27
   LOCATION L0000727     VOLUME   463422.239 3772390.396 368.00
   LOCATION L0000728     VOLUME   463422.249 3772376.397 368.00
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   LOCATION L0000730     VOLUME   463422.270 3772348.397 367.40
   LOCATION L0000731     VOLUME   463422.281 3772334.397 367.00
   LOCATION L0000732     VOLUME   463422.291 3772320.397 367.00
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   LOCATION L0000735     VOLUME   463422.322 3772278.397 366.07
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   LOCATION L0000738     VOLUME   463422.299 3772236.397 365.67
   LOCATION L0000739     VOLUME   463422.248 3772222.397 365.20
   LOCATION L0000740     VOLUME   463422.198 3772208.397 365.00
   LOCATION L0000741     VOLUME   463422.148 3772194.397 365.00
   LOCATION L0000742     VOLUME   463422.097 3772180.397 364.98
   LOCATION L0000743     VOLUME   463422.047 3772166.397 364.95
   LOCATION L0000744     VOLUME   463421.997 3772152.397 364.80
   LOCATION L0000745     VOLUME   463421.946 3772138.397 364.37
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LOCATION L0000747 VOLUME 463421.846 3772110.397 364.00
LOCATION L0000748 VOLUME 463421.796 3772096.398 364.00
LOCATION L0000749 VOLUME 463421.745 3772082.398 363.54
LOCATION L0000750 VOLUME 463421.695 3772068.398 363.07
LOCATION L0000751 VOLUME 463421.645 3772054.398 363.00
LOCATION L0000752 VOLUME 463421.594 3772040.398 363.00
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LOCATION L0000789 VOLUME 463420.846 3771522.399 355.00
LOCATION L0000790 VOLUME 463420.818 3771508.399 355.00
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LOCATION L0000792 VOLUME 463420.742 3771480.399 354.47
LOCATION L0000793 VOLUME 463420.704 3771466.399 354.00
LOCATION L0000794 VOLUME 463420.666 3771452.399 354.00
LOCATION L0000795 VOLUME 463420.628 3771438.399 354.00
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LOCATION L0000797 VOLUME 463420.552 3771410.399 353.97
LOCATION L0000798 VOLUME 463420.514 3771396.399 353.65
LOCATION L0000799 VOLUME 463420.476 3771382.399 353.20
LOCATION L0000800 VOLUME 463420.438 3771368.399 353.00
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LOCATION L0000803 VOLUME 463420.324 3771326.399 352.34
LOCATION L0000804 VOLUME 463420.286 3771312.399 352.00
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LOCATION L0000807 VOLUME 463420.172 3771270.400 351.47
LOCATION L0000808 VOLUME 463420.134 3771256.400 351.00
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LOCATION L0000810 VOLUME 463420.058 3771228.400 351.00
LOCATION L0000811 VOLUME 463420.020 3771214.400 350.60

LOCATION L0000812 VOLUME 463419.982 3771200.400 350.14
LOCATION L0000813 VOLUME 463419.944 3771186.400 350.00
LOCATION L0000814 VOLUME 463419.906 3771172.400 350.00
LOCATION L0000815 VOLUME 463419.868 3771158.400 350.00
LOCATION L0000816 VOLUME 463419.830 3771144.400 350.00
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LOCATION L0000818 VOLUME 463419.754 3771116.400 349.33
LOCATION L0000819 VOLUME 463419.716 3771102.400 349.00
LOCATION L0000820 VOLUME 463419.725 3771088.400 349.00
LOCATION L0000821 VOLUME 463419.736 3771074.400 348.94
LOCATION L0000822 VOLUME 463419.747 3771060.400 348.47
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LOCATION L0000827 VOLUME 463419.801 3770990.400 347.14
LOCATION L0000828 VOLUME 463419.811 3770976.400 347.00
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LOCATION L0000832 VOLUME 463419.854 3770920.400 346.80
LOCATION L0000833 VOLUME 463419.865 3770906.400 346.34
LOCATION L0000834 VOLUME 463419.876 3770892.400 346.00
LOCATION L0000835 VOLUME 463419.887 3770878.400 346.00
LOCATION L0000836 VOLUME 463419.897 3770864.400 345.94
LOCATION L0000837 VOLUME 463419.908 3770850.400 345.47
LOCATION L0000838 VOLUME 463419.919 3770836.400 345.01
LOCATION L0000839 VOLUME 463419.930 3770822.400 345.00
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LOCATION L0000842 VOLUME 463419.962 3770780.400 344.14
LOCATION L0000843 VOLUME 463419.973 3770766.400 344.00
LOCATION L0000844 VOLUME 463419.983 3770752.400 344.00
LOCATION L0000845 VOLUME 463419.994 3770738.400 343.74
LOCATION L0000846 VOLUME 463420.005 3770724.400 343.27
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LOCATION L0000855 VOLUME 463420.040 3770598.400 341.07
LOCATION L0000856 VOLUME 463419.993 3770584.401 341.00
LOCATION L0000857 VOLUME 463419.945 3770570.401 341.00
LOCATION L0000858 VOLUME 463419.898 3770556.401 341.00
LOCATION L0000859 VOLUME 463419.850 3770542.401 341.00
LOCATION L0000860 VOLUME 463419.803 3770528.401 340.74
LOCATION L0000861 VOLUME 463419.755 3770514.401 340.27
LOCATION L0000862 VOLUME 463419.708 3770500.401 340.00
LOCATION L0000863 VOLUME 463419.660 3770486.401 340.00
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LOCATION L0000871 VOLUME 463419.280 3770374.402 339.00
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LOCATION L0000873 VOLUME 463419.185 3770346.402 339.00
LOCATION L0000874 VOLUME 463419.138 3770332.402 339.00
LOCATION L0000875 VOLUME 463419.090 3770318.402 338.74
LOCATION L0000876 VOLUME 463419.043 3770304.402 338.27
LOCATION L0000877 VOLUME 463418.995 3770290.402 338.00

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   LOCATION L0000878     VOLUME   463419.586 3770276.443 338.00
   LOCATION L0000879     VOLUME   463421.414 3770262.563 337.82
   LOCATION L0000880     VOLUME   463423.242 3770248.683 337.36
   LOCATION L0000881     VOLUME   463425.070 3770234.803 336.99
   LOCATION L0000882     VOLUME   463426.898 3770220.922 336.88
   LOCATION L0000883     VOLUME   463428.726 3770207.042 336.70
   LOCATION L0000884     VOLUME   463430.553 3770193.162 336.36
   LOCATION L0000885     VOLUME   463432.395 3770179.284 336.06
   LOCATION L0000886     VOLUME   463434.240 3770165.406 336.00
   LOCATION L0000887     VOLUME   463436.085 3770151.528 336.00
   LOCATION L0000888     VOLUME   463437.930 3770137.650 335.82
   LOCATION L0000889     VOLUME   463439.776 3770123.772 335.50
   LOCATION L0000890     VOLUME   463441.621 3770109.894 335.21
   LOCATION L0000891     VOLUME   463443.466 3770096.017 335.07
   LOCATION L0000892     VOLUME   463445.311 3770082.139 335.00
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   LOCATION L0000896     VOLUME   463449.248 3770026.384 335.00
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   LOCATION L0000898     VOLUME   463449.490 3769998.385 335.00
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   LOCATION L0000902     VOLUME   463449.974 3769942.387 335.00
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   LOCATION L0000904     VOLUME   463450.216 3769914.388 335.00
   LOCATION L0000905     VOLUME   463450.337 3769900.389 335.00
   LOCATION L0000906     VOLUME   463450.458 3769886.390 335.00
   LOCATION L0000907     VOLUME   463450.579 3769872.390 335.00
   LOCATION L0000908     VOLUME   463450.700 3769858.391 335.00
   LOCATION L0000909     VOLUME   463450.821 3769844.391 335.19
   LOCATION L0000910     VOLUME   463450.942 3769830.392 336.57
   LOCATION L0000911     VOLUME   463451.063 3769816.392 337.95
   LOCATION L0000912     VOLUME   463451.185 3769802.393 339.27
** End of LINE VOLUME Source ID = SLINE3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Cedar N 25%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 2.319E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 463423.043, 3772836.616, 375.68, 3.49, 6.51
** 463423.418, 3773261.378, 382.04, 3.49, 6.51
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   LOCATION L0000943     VOLUME   463423.049 3772843.616 375.81
   LOCATION L0000944     VOLUME   463423.061 3772857.616 375.93
   LOCATION L0000945     VOLUME   463423.074 3772871.616 375.98
   LOCATION L0000946     VOLUME   463423.086 3772885.616 376.27
   LOCATION L0000947     VOLUME   463423.098 3772899.616 376.69
   LOCATION L0000948     VOLUME   463423.111 3772913.616 376.91
   LOCATION L0000949     VOLUME   463423.123 3772927.616 376.97
   LOCATION L0000950     VOLUME   463423.136 3772941.616 377.16
   LOCATION L0000951     VOLUME   463423.148 3772955.616 377.57
   LOCATION L0000952     VOLUME   463423.160 3772969.616 377.90
   LOCATION L0000953     VOLUME   463423.173 3772983.616 377.95
   LOCATION L0000954     VOLUME   463423.185 3772997.616 378.04
   LOCATION L0000955     VOLUME   463423.197 3773011.616 378.45
   LOCATION L0000956     VOLUME   463423.210 3773025.616 378.86
   LOCATION L0000957     VOLUME   463423.222 3773039.616 378.93
   LOCATION L0000958     VOLUME   463423.235 3773053.616 378.99
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   LOCATION L0000959     VOLUME   463423.247 3773067.616 379.00
   LOCATION L0000960     VOLUME   463423.259 3773081.616 379.00
   LOCATION L0000961     VOLUME   463423.272 3773095.616 379.31
   LOCATION L0000962     VOLUME   463423.284 3773109.616 379.78
   LOCATION L0000963     VOLUME   463423.296 3773123.616 380.00
   LOCATION L0000964     VOLUME   463423.309 3773137.616 380.00
   LOCATION L0000965     VOLUME   463423.321 3773151.616 380.18
   LOCATION L0000966     VOLUME   463423.334 3773165.616 380.64
   LOCATION L0000967     VOLUME   463423.346 3773179.616 381.00
   LOCATION L0000968     VOLUME   463423.358 3773193.616 381.00
   LOCATION L0000969     VOLUME   463423.371 3773207.616 381.04
   LOCATION L0000970     VOLUME   463423.383 3773221.616 381.51
   LOCATION L0000971     VOLUME   463423.396 3773235.616 381.98
   LOCATION L0000972     VOLUME   463423.408 3773249.616 382.00
** End of LINE VOLUME Source ID = SLINE4
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC Cedar 45%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 1.558E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 463422.651, 3772836.080, 375.66, 3.49, 6.51
** 463422.063, 3772677.476, 372.95, 3.49, 6.51
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   LOCATION L0000984     VOLUME   463422.625 3772829.080 375.38
   LOCATION L0000985     VOLUME   463422.573 3772815.080 375.00
   LOCATION L0000986     VOLUME   463422.521 3772801.081 374.95
   LOCATION L0000987     VOLUME   463422.469 3772787.081 374.91
   LOCATION L0000988     VOLUME   463422.417 3772773.081 374.51
   LOCATION L0000989     VOLUME   463422.365 3772759.081 374.08
   LOCATION L0000990     VOLUME   463422.313 3772745.081 374.00
   LOCATION L0000991     VOLUME   463422.261 3772731.081 374.00
   LOCATION L0000992     VOLUME   463422.209 3772717.081 373.69
   LOCATION L0000993     VOLUME   463422.157 3772703.081 373.22
   LOCATION L0000994     VOLUME   463422.106 3772689.081 373.00
** End of LINE VOLUME Source ID = SLINE5
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC Durst 80%
** PREFIX
** Length of Side = 7.59
** Configuration = Adjacent
** Emission Rate = 3.099E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 463612.231, 3772678.260, 371.68, 3.49, 3.53
** 463434.806, 3772676.691, 372.92, 3.49, 3.53
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   LOCATION L0001018     VOLUME   463608.437 3772678.226 371.82
   LOCATION L0001019     VOLUME   463600.847 3772678.159 371.98
   LOCATION L0001020     VOLUME   463593.257 3772678.092 372.00
   LOCATION L0001021     VOLUME   463585.667 3772678.025 372.00
   LOCATION L0001022     VOLUME   463578.078 3772677.958 372.00
   LOCATION L0001023     VOLUME   463570.488 3772677.891 372.00
   LOCATION L0001024     VOLUME   463562.898 3772677.824 372.23
   LOCATION L0001025     VOLUME   463555.309 3772677.757 372.48
   LOCATION L0001026     VOLUME   463547.719 3772677.689 372.73
   LOCATION L0001027     VOLUME   463540.129 3772677.622 372.98
   LOCATION L0001028     VOLUME   463532.540 3772677.555 373.00
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   LOCATION L0001029     VOLUME   463524.950 3772677.488 373.00
   LOCATION L0001030     VOLUME   463517.360 3772677.421 373.00
   LOCATION L0001031     VOLUME   463509.770 3772677.354 373.00
   LOCATION L0001032     VOLUME   463502.181 3772677.287 373.00
   LOCATION L0001033     VOLUME   463494.591 3772677.220 373.00
   LOCATION L0001034     VOLUME   463487.001 3772677.153 373.00
   LOCATION L0001035     VOLUME   463479.412 3772677.086 373.00
   LOCATION L0001036     VOLUME   463471.822 3772677.019 373.00
   LOCATION L0001037     VOLUME   463464.232 3772676.951 373.00
   LOCATION L0001038     VOLUME   463456.642 3772676.884 373.00
   LOCATION L0001039     VOLUME   463449.053 3772676.817 373.00
   LOCATION L0001040     VOLUME   463441.463 3772676.750 373.00
** End of LINE VOLUME Source ID = SLINE6
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0000382     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000383     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000384     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000385     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000386     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000387     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000388     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000389     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000390     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000391     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000392     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000393     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000394     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000395     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000396     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000397     0.0000003036      3.49      3.53      3.25
   SRCPARAM L0000398     0.0000003036      3.49      3.53      3.25
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** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0000450     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000451     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000452     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000453     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000454     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000455     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000456     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000457     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000458     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000459     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000460     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000461     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000462     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000463     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000464     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000465     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000466     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000467     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000468     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000469     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000470     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000471     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000472     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000473     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000474     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000475     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000476     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000477     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000478     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000479     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000480     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000481     0.00000003514      3.49      3.53      3.25
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   SRCPARAM L0000482     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000483     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000484     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000485     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000486     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000487     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000488     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000489     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000490     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000491     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000492     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000493     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000494     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000495     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000496     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000497     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000498     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000499     0.00000003514      3.49      3.53      3.25
   SRCPARAM L0000500     0.00000003514      3.49      3.53      3.25
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** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0000707     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000708     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000709     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000710     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000711     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000712     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000713     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000714     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000715     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000716     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000717     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000718     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000719     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000720     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000721     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000722     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000723     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000724     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000725     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000726     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000727     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000728     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000729     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000730     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000731     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000732     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000733     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000734     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000735     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000736     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000737     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000738     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000739     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000740     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000741     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000742     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000743     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000744     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000745     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000746     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000747     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000748     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000749     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000750     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000751     0.000000005733      3.49      6.51      3.25
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SRCPARAM L0000752     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000753     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000754     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000755     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000756     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000757     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000758     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000759     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000760     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000761     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000762     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000763     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000764     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000765     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000766     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000767     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000768     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000769     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000770     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000771     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000772     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000773     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000774     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000775     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000776     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000777     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000778     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000779     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000780     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000781     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000782     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000783     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000784     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000785     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000786     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000787     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000788     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000789     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000790     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000791     0.000000005733      3.49      6.51      3.25
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SRCPARAM L0000793     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000794     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000795     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000796     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000797     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000798     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000799     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000800     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000801     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000802     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000803     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000804     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000805     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000806     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000807     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000808     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000809     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000810     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000811     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000812     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000813     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000814     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000815     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000816     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000817     0.000000005733      3.49      6.51      3.25
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SRCPARAM L0000830     0.000000005733      3.49      6.51      3.25
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SRCPARAM L0000833     0.000000005733      3.49      6.51      3.25
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SRCPARAM L0000836     0.000000005733      3.49      6.51      3.25
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SRCPARAM L0000838     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000839     0.000000005733      3.49      6.51      3.25
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SRCPARAM L0000843     0.000000005733      3.49      6.51      3.25
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SRCPARAM L0000846     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000847     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000848     0.000000005733      3.49      6.51      3.25
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SRCPARAM L0000853     0.000000005733      3.49      6.51      3.25
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SRCPARAM L0000856     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000857     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000858     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000859     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000860     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000861     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000862     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000863     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000864     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000865     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000866     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000867     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000868     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000869     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000870     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000871     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000872     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000873     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000874     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000875     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000876     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000877     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000878     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000879     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000880     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000881     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000882     0.000000005733      3.49      6.51      3.25
SRCPARAM L0000883     0.000000005733      3.49      6.51      3.25
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   SRCPARAM L0000884     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000885     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000886     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000887     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000888     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000889     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000890     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000891     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000892     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000893     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000894     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000895     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000896     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000897     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000898     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000899     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000900     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000901     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000902     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000903     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000904     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000905     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000906     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000907     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000908     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000909     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000910     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000911     0.000000005733      3.49      6.51      3.25
   SRCPARAM L0000912     0.000000005733      3.49      6.51      3.25
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** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0000943     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000944     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000945     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000946     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000947     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000948     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000949     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000950     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000951     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000952     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000953     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000954     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000955     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000956     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000957     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000958     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000959     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000960     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000961     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000962     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000963     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000964     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000965     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000966     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000967     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000968     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000969     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000970     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000971     0.00000000773      3.49      6.51      3.25
   SRCPARAM L0000972     0.00000000773      3.49      6.51      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE5
   SRCPARAM L0000984     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000985     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000986     0.00000001416      3.49      6.51      3.25
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   SRCPARAM L0000987     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000988     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000989     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000990     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000991     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000992     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000993     0.00000001416      3.49      6.51      3.25
   SRCPARAM L0000994     0.00000001416      3.49      6.51      3.25
** ----------------------------------------------------------------
** LINE VOLUME Source ID = SLINE6
   SRCPARAM L0001018     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001019     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001020     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001021     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001022     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001023     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001024     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001025     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001026     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001027     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001028     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001029     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001030     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001031     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001032     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001033     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001034     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001035     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001036     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001037     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001038     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001039     0.00000001347      3.49      3.53      3.25
   SRCPARAM L0001040     0.00000001347      3.49      3.53      3.25
** ----------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED "14014 Ops.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE FONT_V9_ADJU\FONT_v9.SFC
   PROFFILE FONT_V9_ADJU\FONT_v9.PFL
   SURFDATA 3102 2011
   UAIRDATA 3190 2011
   SITEDATA 99999 2011
   PROFBASE 367.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
```

```
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL "14014 Ops.AD\AN00GALL.PLT" 31
   SUMMFILE "14014 Ops.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186     852       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187     852       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:16:02

                      PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for   338 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   2035210.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. Urban Roughness Length of 1.0 Meter Assumed.

 **Other Options Specified:
        ADJ_U*   - Use ADJ_U* option for SBL in AERMET
        TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Accepts FLAGPOLE Receptor Heights.
```

```
 **The User Specified a Pollutant Type of:  DPM

 **Model Calculates ANNUAL Averages Only

 **This Run Includes:    338 Source(s);       1 Source Group(s); and      95 Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:    338 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 RLINE/RLINEXT source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with a total of     0 line(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  16216

 **Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing
                                                                 Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   367.00 ;  Decay Coef. =
0.000     ;  Rot. Angle =     0.0
                Emission Units = GRAMS/SEC                                ;  Emission Rate
                Unit Factor =   0.10000E+07
                Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.7 MB of RAM.

 **Input Runstream File:
 aermod.inp
 **Output Print File:
 aermod.out

 **Detailed Error/Message File:   14014
 Ops.err
 **File for Summary of Results:   14014
 Ops.sum
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                  ***       11:16:02

                      PAGE   2
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*


                                                *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.
              URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY       SZ
   SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
     (METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - -
```

L0000382	0	0.30360E-06	463584.2	3772856.8	374.7	3.49	3.53	3.25
YES								
L0000383	0	0.30360E-06	463584.3	3772849.2	374.6	3.49	3.53	3.25
YES								
L0000384	0	0.30360E-06	463584.4	3772841.6	374.4	3.49	3.53	3.25
YES								
L0000385	0	0.30360E-06	463584.5	3772834.0	374.3	3.49	3.53	3.25
YES								
L0000386	0	0.30360E-06	463584.6	3772826.4	374.2	3.49	3.53	3.25
YES								
L0000387	0	0.30360E-06	463584.7	3772818.8	374.0	3.49	3.53	3.25
YES								
L0000388	0	0.30360E-06	463584.8	3772811.3	373.9	3.49	3.53	3.25
YES								
L0000389	0	0.30360E-06	463584.9	3772803.7	373.8	3.49	3.53	3.25
YES								
L0000390	0	0.30360E-06	463585.0	3772796.1	373.7	3.49	3.53	3.25
YES								
L0000391	0	0.30360E-06	463585.1	3772788.5	373.5	3.49	3.53	3.25
YES								
L0000392	0	0.30360E-06	463585.2	3772780.9	373.4	3.49	3.53	3.25
YES								
L0000393	0	0.30360E-06	463585.3	3772773.3	373.3	3.49	3.53	3.25
YES								
L0000394	0	0.30360E-06	463585.5	3772765.7	373.2	3.49	3.53	3.25
YES								
L0000395	0	0.30360E-06	463585.6	3772758.1	373.0	3.49	3.53	3.25
YES								
L0000396	0	0.30360E-06	463585.7	3772750.5	373.0	3.49	3.53	3.25
YES								
L0000397	0	0.30360E-06	463585.8	3772743.0	373.0	3.49	3.53	3.25
YES								
L0000398	0	0.30360E-06	463585.9	3772735.4	373.0	3.49	3.53	3.25
YES								
L0000450	0	0.35140E-07	463437.8	3772836.0	375.3	3.49	3.53	3.25
YES								
L0000451	0	0.35140E-07	463445.4	3772836.1	375.1	3.49	3.53	3.25
YES								
L0000452	0	0.35140E-07	463449.4	3772840.8	375.0	3.49	3.53	3.25
YES								
L0000453	0	0.35140E-07	463451.3	3772848.1	375.1	3.49	3.53	3.25
YES								
L0000454	0	0.35140E-07	463453.2	3772855.4	375.3	3.49	3.53	3.25
YES								
L0000455	0	0.35140E-07	463455.2	3772862.8	375.6	3.49	3.53	3.25
YES								
L0000456	0	0.35140E-07	463460.3	3772866.1	375.7	3.49	3.53	3.25
YES								
L0000457	0	0.35140E-07	463467.9	3772866.4	375.7	3.49	3.53	3.25
YES								
L0000458	0	0.35140E-07	463475.5	3772866.8	375.7	3.49	3.53	3.25
YES								
L0000459	0	0.35140E-07	463483.1	3772867.1	375.7	3.49	3.53	3.25
YES								
L0000460	0	0.35140E-07	463490.7	3772867.4	375.7	3.49	3.53	3.25
YES								
L0000461	0	0.35140E-07	463498.2	3772867.8	375.7	3.49	3.53	3.25
YES								
L0000462	0	0.35140E-07	463505.8	3772868.1	375.7	3.49	3.53	3.25
YES								
L0000463	0	0.35140E-07	463513.4	3772868.4	375.6	3.49	3.53	3.25
YES								
L0000464	0	0.35140E-07	463521.0	3772868.8	375.5	3.49	3.53	3.25
YES								
L0000465	0	0.35140E-07	463528.6	3772869.1	375.3	3.49	3.53	3.25

YES
L0000466 0 0.35140E-07 463536.2 3772869.4 375.1 3.49 3.53 3.25
YES
L0000467 0 0.35140E-07 463543.7 3772869.8 375.0 3.49 3.53 3.25
YES
L0000468 0 0.35140E-07 463551.3 3772870.1 375.0 3.49 3.53 3.25
YES
L0000469 0 0.35140E-07 463558.9 3772870.4 375.0 3.49 3.53 3.25
YES
L0000470 0 0.35140E-07 463566.5 3772870.8 375.0 3.49 3.53 3.25
YES
L0000471 0 0.35140E-07 463574.1 3772871.1 375.0 3.49 3.53 3.25
YES
L0000472 0 0.35140E-07 463581.6 3772871.4 374.9 3.49 3.53 3.25
YES

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER URBAN SOURCE PART.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	SCALAR VARY BY
L0000473	0	0.35140E-07	463589.2	3772871.8	374.9	3.49	3.53	3.25	YES
L0000474	0	0.35140E-07	463596.8	3772872.1	374.9	3.49	3.53	3.25	YES
L0000475	0	0.35140E-07	463604.4	3772872.4	374.9	3.49	3.53	3.25	YES
L0000476	0	0.35140E-07	463608.3	3772868.9	374.8	3.49	3.53	3.25	YES
L0000477	0	0.35140E-07	463608.5	3772861.3	374.5	3.49	3.53	3.25	YES
L0000478	0	0.35140E-07	463608.6	3772853.7	374.2	3.49	3.53	3.25	YES
L0000479	0	0.35140E-07	463608.7	3772846.1	374.0	3.49	3.53	3.25	YES
L0000480	0	0.35140E-07	463608.9	3772838.5	374.0	3.49	3.53	3.25	YES
L0000481	0	0.35140E-07	463609.0	3772830.9	374.0	3.49	3.53	3.25	YES
L0000482	0	0.35140E-07	463609.1	3772823.3	374.0	3.49	3.53	3.25	YES
L0000483	0	0.35140E-07	463609.2	3772815.8	374.0	3.49	3.53	3.25	YES
L0000484	0	0.35140E-07	463609.4	3772808.2	373.7	3.49	3.53	3.25	YES
L0000485	0	0.35140E-07	463609.5	3772800.6	373.5	3.49	3.53	3.25	YES
L0000486	0	0.35140E-07	463609.6	3772793.0	373.2	3.49	3.53	3.25	YES
L0000487	0	0.35140E-07	463609.8	3772785.4	373.0	3.49	3.53	3.25	YES
L0000488	0	0.35140E-07	463609.9	3772777.8	373.0	3.49	3.53	3.25	

YES								
L0000489	0	0.35140E-07	463610.0	3772770.2	373.0	3.49	3.53	3.25
YES								
L0000490	0	0.35140E-07	463610.1	3772762.6	373.0	3.49	3.53	3.25
YES								
L0000491	0	0.35140E-07	463610.3	3772755.0	373.0	3.49	3.53	3.25
YES								
L0000492	0	0.35140E-07	463610.4	3772747.5	372.9	3.49	3.53	3.25
YES								
L0000493	0	0.35140E-07	463610.5	3772739.9	372.8	3.49	3.53	3.25
YES								
L0000494	0	0.35140E-07	463610.7	3772732.3	372.7	3.49	3.53	3.25
YES								
L0000495	0	0.35140E-07	463610.8	3772724.7	372.6	3.49	3.53	3.25
YES								
L0000496	0	0.35140E-07	463610.9	3772717.1	372.4	3.49	3.53	3.25
YES								
L0000497	0	0.35140E-07	463611.0	3772709.5	372.3	3.49	3.53	3.25
YES								
L0000498	0	0.35140E-07	463611.2	3772701.9	372.1	3.49	3.53	3.25
YES								
L0000499	0	0.35140E-07	463611.3	3772694.3	372.0	3.49	3.53	3.25
YES								
L0000500	0	0.35140E-07	463611.4	3772686.7	371.9	3.49	3.53	3.25
YES								
L0000707	0	0.57330E-08	463422.0	3772670.4	373.0	3.49	6.51	3.25
YES								
L0000708	0	0.57330E-08	463422.0	3772656.4	372.7	3.49	6.51	3.25
YES								
L0000709	0	0.57330E-08	463422.1	3772642.4	372.2	3.49	6.51	3.25
YES								
L0000710	0	0.57330E-08	463422.1	3772628.4	372.0	3.49	6.51	3.25
YES								
L0000711	0	0.57330E-08	463422.1	3772614.4	372.0	3.49	6.51	3.25
YES								
L0000712	0	0.57330E-08	463422.1	3772600.4	371.8	3.49	6.51	3.25
YES								
L0000713	0	0.57330E-08	463422.1	3772586.4	371.4	3.49	6.51	3.25
YES								
L0000714	0	0.57330E-08	463422.1	3772572.4	371.1	3.49	6.51	3.25
YES								
L0000715	0	0.57330E-08	463422.1	3772558.4	371.0	3.49	6.51	3.25
YES								
L0000716	0	0.57330E-08	463422.1	3772544.4	371.0	3.49	6.51	3.25
YES								
L0000717	0	0.57330E-08	463422.1	3772530.4	371.0	3.49	6.51	3.25
YES								
L0000718	0	0.57330E-08	463422.1	3772516.4	371.0	3.49	6.51	3.25
YES								

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER URBAN SOURCE PART.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	EMISSION RATE SCALAR VARY BY

- - - -

YES
L0000751 0 0.57330E-08 463421.6 3772054.4 363.0 3.49 6.51 3.25
YES
L0000752 0 0.57330E-08 463421.6 3772040.4 363.0 3.49 6.51 3.25
YES
L0000753 0 0.57330E-08 463421.5 3772026.4 362.7 3.49 6.51 3.25
YES
L0000754 0 0.57330E-08 463421.5 3772012.4 362.2 3.49 6.51 3.25
YES
L0000755 0 0.57330E-08 463421.4 3771998.4 362.0 3.49 6.51 3.25
YES
L0000756 0 0.57330E-08 463421.4 3771984.4 362.0 3.49 6.51 3.25
YES
L0000757 0 0.57330E-08 463421.3 3771970.4 362.0 3.49 6.51 3.25
YES
L0000758 0 0.57330E-08 463421.3 3771956.4 362.0 3.49 6.51 3.25
YES

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER URBAN SOURCE PART.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ
L0000759	0	0.57330E-08	463421.2	3771942.4	361.8	3.49	6.51	3.25
YES								
L0000760	0	0.57330E-08	463421.2	3771928.4	361.4	3.49	6.51	3.25
YES								
L0000761	0	0.57330E-08	463421.2	3771914.4	361.0	3.49	6.51	3.25
YES								
L0000762	0	0.57330E-08	463421.2	3771900.4	361.0	3.49	6.51	3.25
YES								
L0000763	0	0.57330E-08	463421.2	3771886.4	361.0	3.49	6.51	3.25
YES								
L0000764	0	0.57330E-08	463421.2	3771872.4	360.5	3.49	6.51	3.25
YES								
L0000765	0	0.57330E-08	463421.1	3771858.4	360.1	3.49	6.51	3.25
YES								
L0000766	0	0.57330E-08	463421.1	3771844.4	360.0	3.49	6.51	3.25
YES								
L0000767	0	0.57330E-08	463421.1	3771830.4	360.0	3.49	6.51	3.25
YES								
L0000768	0	0.57330E-08	463421.1	3771816.4	359.7	3.49	6.51	3.25
YES								
L0000769	0	0.57330E-08	463421.1	3771802.4	359.2	3.49	6.51	3.25
YES								
L0000770	0	0.57330E-08	463421.1	3771788.4	359.0	3.49	6.51	3.25
YES								
L0000771	0	0.57330E-08	463421.1	3771774.4	359.0	3.49	6.51	3.25
YES								
L0000772	0	0.57330E-08	463421.1	3771760.4	358.8	3.49	6.51	3.25
YES								
L0000773	0	0.57330E-08	463421.0	3771746.4	358.3	3.49	6.51	3.25

YES
L0000774 0 0.57330E-08 463421.0 3771732.4 358.0 3.49 6.51 3.25
YES
L0000775 0 0.57330E-08 463421.0 3771718.4 358.0 3.49 6.51 3.25
YES
L0000776 0 0.57330E-08 463421.0 3771704.4 358.0 3.49 6.51 3.25
YES
L0000777 0 0.57330E-08 463421.0 3771690.4 358.0 3.49 6.51 3.25
YES
L0000778 0 0.57330E-08 463421.0 3771676.4 358.0 3.49 6.51 3.25
YES
L0000779 0 0.57330E-08 463421.0 3771662.4 357.5 3.49 6.51 3.25
YES
L0000780 0 0.57330E-08 463421.0 3771648.4 357.1 3.49 6.51 3.25
YES
L0000781 0 0.57330E-08 463420.9 3771634.4 357.0 3.49 6.51 3.25
YES
L0000782 0 0.57330E-08 463420.9 3771620.4 357.0 3.49 6.51 3.25
YES
L0000783 0 0.57330E-08 463420.9 3771606.4 356.7 3.49 6.51 3.25
YES
L0000784 0 0.57330E-08 463420.9 3771592.4 356.2 3.49 6.51 3.25
YES
L0000785 0 0.57330E-08 463420.9 3771578.4 356.0 3.49 6.51 3.25
YES
L0000786 0 0.57330E-08 463420.9 3771564.4 356.0 3.49 6.51 3.25
YES
L0000787 0 0.57330E-08 463420.9 3771550.4 355.8 3.49 6.51 3.25
YES
L0000788 0 0.57330E-08 463420.9 3771536.4 355.3 3.49 6.51 3.25
YES
L0000789 0 0.57330E-08 463420.8 3771522.4 355.0 3.49 6.51 3.25
YES
L0000790 0 0.57330E-08 463420.8 3771508.4 355.0 3.49 6.51 3.25
YES
L0000791 0 0.57330E-08 463420.8 3771494.4 354.9 3.49 6.51 3.25
YES
L0000792 0 0.57330E-08 463420.7 3771480.4 354.5 3.49 6.51 3.25
YES
L0000793 0 0.57330E-08 463420.7 3771466.4 354.0 3.49 6.51 3.25
YES
L0000794 0 0.57330E-08 463420.7 3771452.4 354.0 3.49 6.51 3.25
YES
L0000795 0 0.57330E-08 463420.6 3771438.4 354.0 3.49 6.51 3.25
YES
L0000796 0 0.57330E-08 463420.6 3771424.4 354.0 3.49 6.51 3.25
YES
L0000797 0 0.57330E-08 463420.6 3771410.4 354.0 3.49 6.51 3.25
YES
L0000798 0 0.57330E-08 463420.5 3771396.4 353.7 3.49 6.51 3.25
YES

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE	NUMBER URBAN SOURCE	EMISSION RATE PART. SCALAR	EMISSION RATE (GRAMS/SEC) VARY	X	Y	BASE ELEV.	RELEASE HEIGHT	INIT. SY	INIT. SZ

ID	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	BY
L0000799	0	0.57330E-08	463420.5	3771382.4	353.2	3.49	6.51	3.25 YES
L0000800	0	0.57330E-08	463420.4	3771368.4	353.0	3.49	6.51	3.25 YES
L0000801	0	0.57330E-08	463420.4	3771354.4	353.0	3.49	6.51	3.25 YES
L0000802	0	0.57330E-08	463420.4	3771340.4	352.8	3.49	6.51	3.25 YES
L0000803	0	0.57330E-08	463420.3	3771326.4	352.3	3.49	6.51	3.25 YES
L0000804	0	0.57330E-08	463420.3	3771312.4	352.0	3.49	6.51	3.25 YES
L0000805	0	0.57330E-08	463420.2	3771298.4	352.0	3.49	6.51	3.25 YES
L0000806	0	0.57330E-08	463420.2	3771284.4	351.9	3.49	6.51	3.25 YES
L0000807	0	0.57330E-08	463420.2	3771270.4	351.5	3.49	6.51	3.25 YES
L0000808	0	0.57330E-08	463420.1	3771256.4	351.0	3.49	6.51	3.25 YES
L0000809	0	0.57330E-08	463420.1	3771242.4	351.0	3.49	6.51	3.25 YES
L0000810	0	0.57330E-08	463420.1	3771228.4	351.0	3.49	6.51	3.25 YES
L0000811	0	0.57330E-08	463420.0	3771214.4	350.6	3.49	6.51	3.25 YES
L0000812	0	0.57330E-08	463420.0	3771200.4	350.1	3.49	6.51	3.25 YES
L0000813	0	0.57330E-08	463419.9	3771186.4	350.0	3.49	6.51	3.25 YES
L0000814	0	0.57330E-08	463419.9	3771172.4	350.0	3.49	6.51	3.25 YES
L0000815	0	0.57330E-08	463419.9	3771158.4	350.0	3.49	6.51	3.25 YES
L0000816	0	0.57330E-08	463419.8	3771144.4	350.0	3.49	6.51	3.25 YES
L0000817	0	0.57330E-08	463419.8	3771130.4	349.8	3.49	6.51	3.25 YES
L0000818	0	0.57330E-08	463419.8	3771116.4	349.3	3.49	6.51	3.25 YES
L0000819	0	0.57330E-08	463419.7	3771102.4	349.0	3.49	6.51	3.25 YES
L0000820	0	0.57330E-08	463419.7	3771088.4	349.0	3.49	6.51	3.25 YES
L0000821	0	0.57330E-08	463419.7	3771074.4	348.9	3.49	6.51	3.25 YES
L0000822	0	0.57330E-08	463419.7	3771060.4	348.5	3.49	6.51	3.25 YES
L0000823	0	0.57330E-08	463419.8	3771046.4	348.0	3.49	6.51	3.25 YES
L0000824	0	0.57330E-08	463419.8	3771032.4	348.0	3.49	6.51	3.25 YES
L0000825	0	0.57330E-08	463419.8	3771018.4	348.0	3.49	6.51	3.25 YES
L0000826	0	0.57330E-08	463419.8	3771004.4	347.6	3.49	6.51	3.25 YES
L0000827	0	0.57330E-08	463419.8	3770990.4	347.1	3.49	6.51	3.25 YES
L0000828	0	0.57330E-08	463419.8	3770976.4	347.0	3.49	6.51	3.25 YES
L0000829	0	0.57330E-08	463419.8	3770962.4	347.0	3.49	6.51	3.25

YES
L0000830 0 0.57330E-08 463419.8 3770948.4 347.0 3.49 6.51 3.25
YES
L0000831 0 0.57330E-08 463419.8 3770934.4 347.0 3.49 6.51 3.25
YES
L0000832 0 0.57330E-08 463419.9 3770920.4 346.8 3.49 6.51 3.25
YES
L0000833 0 0.57330E-08 463419.9 3770906.4 346.3 3.49 6.51 3.25
YES
L0000834 0 0.57330E-08 463419.9 3770892.4 346.0 3.49 6.51 3.25
YES
L0000835 0 0.57330E-08 463419.9 3770878.4 346.0 3.49 6.51 3.25
YES
L0000836 0 0.57330E-08 463419.9 3770864.4 345.9 3.49 6.51 3.25
YES
L0000837 0 0.57330E-08 463419.9 3770850.4 345.5 3.49 6.51 3.25
YES
L0000838 0 0.57330E-08 463419.9 3770836.4 345.0 3.49 6.51 3.25
YES

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER URBAN SOURCE PART.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ
L0000839	0	0.57330E-08	463419.9	3770822.4	345.0	3.49	6.51	3.25
YES								
L0000840	0	0.57330E-08	463419.9	3770808.4	345.0	3.49	6.51	3.25
YES								
L0000841	0	0.57330E-08	463420.0	3770794.4	344.6	3.49	6.51	3.25
YES								
L0000842	0	0.57330E-08	463420.0	3770780.4	344.1	3.49	6.51	3.25
YES								
L0000843	0	0.57330E-08	463420.0	3770766.4	344.0	3.49	6.51	3.25
YES								
L0000844	0	0.57330E-08	463420.0	3770752.4	344.0	3.49	6.51	3.25
YES								
L0000845	0	0.57330E-08	463420.0	3770738.4	343.7	3.49	6.51	3.25
YES								
L0000846	0	0.57330E-08	463420.0	3770724.4	343.3	3.49	6.51	3.25
YES								
L0000847	0	0.57330E-08	463420.0	3770710.4	343.0	3.49	6.51	3.25
YES								
L0000848	0	0.57330E-08	463420.0	3770696.4	343.0	3.49	6.51	3.25
YES								
L0000849	0	0.57330E-08	463420.0	3770682.4	342.9	3.49	6.51	3.25
YES								
L0000850	0	0.57330E-08	463420.0	3770668.4	342.4	3.49	6.51	3.25
YES								
L0000851	0	0.57330E-08	463420.1	3770654.4	342.0	3.49	6.51	3.25
YES								
L0000852	0	0.57330E-08	463420.1	3770640.4	342.0	3.49	6.51	3.25

YES								
L0000853	0	0.57330E-08	463420.1	3770626.4	342.0	3.49	6.51	3.25
YES								
L0000854	0	0.57330E-08	463420.1	3770612.4	341.5	3.49	6.51	3.25
YES								
L0000855	0	0.57330E-08	463420.0	3770598.4	341.1	3.49	6.51	3.25
YES								
L0000856	0	0.57330E-08	463420.0	3770584.4	341.0	3.49	6.51	3.25
YES								
L0000857	0	0.57330E-08	463419.9	3770570.4	341.0	3.49	6.51	3.25
YES								
L0000858	0	0.57330E-08	463419.9	3770556.4	341.0	3.49	6.51	3.25
YES								
L0000859	0	0.57330E-08	463419.8	3770542.4	341.0	3.49	6.51	3.25
YES								
L0000860	0	0.57330E-08	463419.8	3770528.4	340.7	3.49	6.51	3.25
YES								
L0000861	0	0.57330E-08	463419.8	3770514.4	340.3	3.49	6.51	3.25
YES								
L0000862	0	0.57330E-08	463419.7	3770500.4	340.0	3.49	6.51	3.25
YES								
L0000863	0	0.57330E-08	463419.7	3770486.4	340.0	3.49	6.51	3.25
YES								
L0000864	0	0.57330E-08	463419.6	3770472.4	340.0	3.49	6.51	3.25
YES								
L0000865	0	0.57330E-08	463419.6	3770458.4	340.0	3.49	6.51	3.25
YES								
L0000866	0	0.57330E-08	463419.5	3770444.4	340.0	3.49	6.51	3.25
YES								
L0000867	0	0.57330E-08	463419.5	3770430.4	340.0	3.49	6.51	3.25
YES								
L0000868	0	0.57330E-08	463419.4	3770416.4	340.0	3.49	6.51	3.25
YES								
L0000869	0	0.57330E-08	463419.4	3770402.4	339.5	3.49	6.51	3.25
YES								
L0000870	0	0.57330E-08	463419.3	3770388.4	339.1	3.49	6.51	3.25
YES								
L0000871	0	0.57330E-08	463419.3	3770374.4	339.0	3.49	6.51	3.25
YES								
L0000872	0	0.57330E-08	463419.2	3770360.4	339.0	3.49	6.51	3.25
YES								
L0000873	0	0.57330E-08	463419.2	3770346.4	339.0	3.49	6.51	3.25
YES								
L0000874	0	0.57330E-08	463419.1	3770332.4	339.0	3.49	6.51	3.25
YES								
L0000875	0	0.57330E-08	463419.1	3770318.4	338.7	3.49	6.51	3.25
YES								
L0000876	0	0.57330E-08	463419.0	3770304.4	338.3	3.49	6.51	3.25
YES								
L0000877	0	0.57330E-08	463419.0	3770290.4	338.0	3.49	6.51	3.25
YES								
L0000878	0	0.57330E-08	463419.6	3770276.4	338.0	3.49	6.51	3.25
YES								

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

NUMBER	EMISSION RATE		BASE	RELEASE	INIT.	INIT.
URBAN	EMISSION RATE					

SOURCE ID	PART. SCALAR VARY BY	(GRAMS/SEC)	X (METERS)	Y (METERS)	ELEV. (METERS)	HEIGHT (METERS)	SY (METERS)	SZ (METERS)	
L0000879	0	0.57330E-08	463421.4	3770262.6	337.8	3.49	6.51	3.25	YES
L0000880	0	0.57330E-08	463423.2	3770248.7	337.4	3.49	6.51	3.25	YES
L0000881	0	0.57330E-08	463425.1	3770234.8	337.0	3.49	6.51	3.25	YES
L0000882	0	0.57330E-08	463426.9	3770220.9	336.9	3.49	6.51	3.25	YES
L0000883	0	0.57330E-08	463428.7	3770207.0	336.7	3.49	6.51	3.25	YES
L0000884	0	0.57330E-08	463430.6	3770193.2	336.4	3.49	6.51	3.25	YES
L0000885	0	0.57330E-08	463432.4	3770179.3	336.1	3.49	6.51	3.25	YES
L0000886	0	0.57330E-08	463434.2	3770165.4	336.0	3.49	6.51	3.25	YES
L0000887	0	0.57330E-08	463436.1	3770151.5	336.0	3.49	6.51	3.25	YES
L0000888	0	0.57330E-08	463437.9	3770137.6	335.8	3.49	6.51	3.25	YES
L0000889	0	0.57330E-08	463439.8	3770123.8	335.5	3.49	6.51	3.25	YES
L0000890	0	0.57330E-08	463441.6	3770109.9	335.2	3.49	6.51	3.25	YES
L0000891	0	0.57330E-08	463443.5	3770096.0	335.1	3.49	6.51	3.25	YES
L0000892	0	0.57330E-08	463445.3	3770082.1	335.0	3.49	6.51	3.25	YES
L0000893	0	0.57330E-08	463447.2	3770068.3	335.0	3.49	6.51	3.25	YES
L0000894	0	0.57330E-08	463449.0	3770054.4	335.0	3.49	6.51	3.25	YES
L0000895	0	0.57330E-08	463449.1	3770040.4	335.0	3.49	6.51	3.25	YES
L0000896	0	0.57330E-08	463449.2	3770026.4	335.0	3.49	6.51	3.25	YES
L0000897	0	0.57330E-08	463449.4	3770012.4	335.0	3.49	6.51	3.25	YES
L0000898	0	0.57330E-08	463449.5	3769998.4	335.0	3.49	6.51	3.25	YES
L0000899	0	0.57330E-08	463449.6	3769984.4	335.0	3.49	6.51	3.25	YES
L0000900	0	0.57330E-08	463449.7	3769970.4	335.0	3.49	6.51	3.25	YES
L0000901	0	0.57330E-08	463449.9	3769956.4	335.0	3.49	6.51	3.25	YES
L0000902	0	0.57330E-08	463450.0	3769942.4	335.0	3.49	6.51	3.25	YES
L0000903	0	0.57330E-08	463450.1	3769928.4	335.0	3.49	6.51	3.25	YES
L0000904	0	0.57330E-08	463450.2	3769914.4	335.0	3.49	6.51	3.25	YES
L0000905	0	0.57330E-08	463450.3	3769900.4	335.0	3.49	6.51	3.25	YES
L0000906	0	0.57330E-08	463450.5	3769886.4	335.0	3.49	6.51	3.25	YES
L0000907	0	0.57330E-08	463450.6	3769872.4	335.0	3.49	6.51	3.25	YES
L0000908	0	0.57330E-08	463450.7	3769858.4	335.0	3.49	6.51	3.25	

YES
L0000909 0 0.57330E-08 463450.8 3769844.4 335.2 3.49 6.51 3.25
YES
L0000910 0 0.57330E-08 463450.9 3769830.4 336.6 3.49 6.51 3.25
YES
L0000911 0 0.57330E-08 463451.1 3769816.4 337.9 3.49 6.51 3.25
YES
L0000912 0 0.57330E-08 463451.2 3769802.4 339.3 3.49 6.51 3.25
YES
L0000943 0 0.77300E-08 463423.0 3772843.6 375.8 3.49 6.51 3.25
YES
L0000944 0 0.77300E-08 463423.1 3772857.6 375.9 3.49 6.51 3.25
YES
L0000945 0 0.77300E-08 463423.1 3772871.6 376.0 3.49 6.51 3.25
YES
L0000946 0 0.77300E-08 463423.1 3772885.6 376.3 3.49 6.51 3.25
YES
L0000947 0 0.77300E-08 463423.1 3772899.6 376.7 3.49 6.51 3.25
YES
L0000948 0 0.77300E-08 463423.1 3772913.6 376.9 3.49 6.51 3.25
YES

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER URBAN SOURCE PART.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ
L0000949	0	0.77300E-08	463423.1	3772927.6	377.0	3.49	6.51	3.25
YES								
L0000950	0	0.77300E-08	463423.1	3772941.6	377.2	3.49	6.51	3.25
YES								
L0000951	0	0.77300E-08	463423.1	3772955.6	377.6	3.49	6.51	3.25
YES								
L0000952	0	0.77300E-08	463423.2	3772969.6	377.9	3.49	6.51	3.25
YES								
L0000953	0	0.77300E-08	463423.2	3772983.6	377.9	3.49	6.51	3.25
YES								
L0000954	0	0.77300E-08	463423.2	3772997.6	378.0	3.49	6.51	3.25
YES								
L0000955	0	0.77300E-08	463423.2	3773011.6	378.4	3.49	6.51	3.25
YES								
L0000956	0	0.77300E-08	463423.2	3773025.6	378.9	3.49	6.51	3.25
YES								
L0000957	0	0.77300E-08	463423.2	3773039.6	378.9	3.49	6.51	3.25
YES								
L0000958	0	0.77300E-08	463423.2	3773053.6	379.0	3.49	6.51	3.25
YES								
L0000959	0	0.77300E-08	463423.2	3773067.6	379.0	3.49	6.51	3.25
YES								
L0000960	0	0.77300E-08	463423.3	3773081.6	379.0	3.49	6.51	3.25
YES								
L0000961	0	0.77300E-08	463423.3	3773095.6	379.3	3.49	6.51	3.25

YES								
L0000962	0	0.77300E-08	463423.3	3773109.6	379.8	3.49	6.51	3.25
YES								
L0000963	0	0.77300E-08	463423.3	3773123.6	380.0	3.49	6.51	3.25
YES								
L0000964	0	0.77300E-08	463423.3	3773137.6	380.0	3.49	6.51	3.25
YES								
L0000965	0	0.77300E-08	463423.3	3773151.6	380.2	3.49	6.51	3.25
YES								
L0000966	0	0.77300E-08	463423.3	3773165.6	380.6	3.49	6.51	3.25
YES								
L0000967	0	0.77300E-08	463423.3	3773179.6	381.0	3.49	6.51	3.25
YES								
L0000968	0	0.77300E-08	463423.4	3773193.6	381.0	3.49	6.51	3.25
YES								
L0000969	0	0.77300E-08	463423.4	3773207.6	381.0	3.49	6.51	3.25
YES								
L0000970	0	0.77300E-08	463423.4	3773221.6	381.5	3.49	6.51	3.25
YES								
L0000971	0	0.77300E-08	463423.4	3773235.6	382.0	3.49	6.51	3.25
YES								
L0000972	0	0.77300E-08	463423.4	3773249.6	382.0	3.49	6.51	3.25
YES								
L0000984	0	0.14160E-07	463422.6	3772829.1	375.4	3.49	6.51	3.25
YES								
L0000985	0	0.14160E-07	463422.6	3772815.1	375.0	3.49	6.51	3.25
YES								
L0000986	0	0.14160E-07	463422.5	3772801.1	374.9	3.49	6.51	3.25
YES								
L0000987	0	0.14160E-07	463422.5	3772787.1	374.9	3.49	6.51	3.25
YES								
L0000988	0	0.14160E-07	463422.4	3772773.1	374.5	3.49	6.51	3.25
YES								
L0000989	0	0.14160E-07	463422.4	3772759.1	374.1	3.49	6.51	3.25
YES								
L0000990	0	0.14160E-07	463422.3	3772745.1	374.0	3.49	6.51	3.25
YES								
L0000991	0	0.14160E-07	463422.3	3772731.1	374.0	3.49	6.51	3.25
YES								
L0000992	0	0.14160E-07	463422.2	3772717.1	373.7	3.49	6.51	3.25
YES								
L0000993	0	0.14160E-07	463422.2	3772703.1	373.2	3.49	6.51	3.25
YES								
L0000994	0	0.14160E-07	463422.1	3772689.1	373.0	3.49	6.51	3.25
YES								
L0001018	0	0.13470E-07	463608.4	3772678.2	371.8	3.49	3.53	3.25
YES								
L0001019	0	0.13470E-07	463600.8	3772678.2	372.0	3.49	3.53	3.25
YES								
L0001020	0	0.13470E-07	463593.3	3772678.1	372.0	3.49	3.53	3.25
YES								
L0001021	0	0.13470E-07	463585.7	3772678.0	372.0	3.49	3.53	3.25
YES								
L0001022	0	0.13470E-07	463578.1	3772678.0	372.0	3.49	3.53	3.25
YES								

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER URBAN SOURCE PART.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	SOURCE VARY BY
L0001023	0	0.13470E-07	463570.5	3772677.9	372.0	3.49	3.53	3.25	YES
L0001024	0	0.13470E-07	463562.9	3772677.8	372.2	3.49	3.53	3.25	YES
L0001025	0	0.13470E-07	463555.3	3772677.8	372.5	3.49	3.53	3.25	YES
L0001026	0	0.13470E-07	463547.7	3772677.7	372.7	3.49	3.53	3.25	YES
L0001027	0	0.13470E-07	463540.1	3772677.6	373.0	3.49	3.53	3.25	YES
L0001028	0	0.13470E-07	463532.5	3772677.6	373.0	3.49	3.53	3.25	YES
L0001029	0	0.13470E-07	463525.0	3772677.5	373.0	3.49	3.53	3.25	YES
L0001030	0	0.13470E-07	463517.4	3772677.4	373.0	3.49	3.53	3.25	YES
L0001031	0	0.13470E-07	463509.8	3772677.4	373.0	3.49	3.53	3.25	YES
L0001032	0	0.13470E-07	463502.2	3772677.3	373.0	3.49	3.53	3.25	YES
L0001033	0	0.13470E-07	463494.6	3772677.2	373.0	3.49	3.53	3.25	YES
L0001034	0	0.13470E-07	463487.0	3772677.2	373.0	3.49	3.53	3.25	YES
L0001035	0	0.13470E-07	463479.4	3772677.1	373.0	3.49	3.53	3.25	YES
L0001036	0	0.13470E-07	463471.8	3772677.0	373.0	3.49	3.53	3.25	YES
L0001037	0	0.13470E-07	463464.2	3772677.0	373.0	3.49	3.53	3.25	YES
L0001038	0	0.13470E-07	463456.6	3772676.9	373.0	3.49	3.53	3.25	YES
L0001039	0	0.13470E-07	463449.1	3772676.8	373.0	3.49	3.53	3.25	YES
L0001040	0	0.13470E-07	463441.5	3772676.8	373.0	3.49	3.53	3.25	YES

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	L0000382 , L0000383 , L0000384 , L0000385 , L0000386 , L0000387 , L0000388 , L0000389 , L0000390 , L0000391 , L0000392 , L0000393 , L0000394 , L0000395 , L0000396 , L0000397 ,

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L0000457 , L0000458 , L0000459 , L0000460 , L0000461 , L0000462
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

L0000799 , L0000800 , L0000801 , L0000802 , L0000803 , L0000804
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L0000807 , L0000808 , L0000809 , L0000810 , L0000811 , L0000812
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L0000823 , L0000824 , L0000825 , L0000826 , L0000827 , L0000828
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L0000831 , L0000832 , L0000833 , L0000834 , L0000835 , L0000836
, L0000837 , L0000838 ,

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, L0001021 , L0001022 ,

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0001031 , L0001032 , L0001033 , L0001034 , L0001035 , L0001036 , L0001037 , L0001038 ,
	L0001039 , L0001040 ,

FF *** AERMOD - VERSION 21112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst Rialto\14014 Ops\14 *** 01/04/22
*** AERMET - VERSION 16216 ***
*** *** 11:16:02

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
	2035210.	L0000382 , L0000383 , L0000384 , L0000385 , L0000386 , L0000387 , L0000388 , L0000389 ,
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		L0000457 , L0000458 , L0000459 , L0000460 , L0000461 , L0000462 , L0000463 , L0000464 ,
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		L0000481 , L0000482 , L0000483 , L0000484 , L0000485 , L0000486 , L0000487 , L0000488 ,
		L0000489 , L0000490 , L0000491 , L0000492 , L0000493 , L0000494 , L0000495 , L0000496 ,
		L0000497 , L0000498 , L0000499 , L0000500 , L0000707 , L0000708 , L0000709 , L0000710 ,
		L0000711 , L0000712 , L0000713 , L0000714 , L0000715 , L0000716 , L0000717 , L0000718 ,
		L0000719 , L0000720 , L0000721 , L0000722 , L0000723 , L0000724 , L0000725 , L0000726 ,

L0000727 , L0000728 , L0000729 , L0000730 , L0000731 , L0000732
, L0000733 , L0000734 ,

L0000735 , L0000736 , L0000737 , L0000738 , L0000739 , L0000740
, L0000741 , L0000742 ,

L0000743 , L0000744 , L0000745 , L0000746 , L0000747 , L0000748
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L0000783 , L0000784 , L0000785 , L0000786 , L0000787 , L0000788
, L0000789 , L0000790 ,

L0000791 , L0000792 , L0000793 , L0000794 , L0000795 , L0000796
, L0000797 , L0000798 ,

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

L0000799 , L0000800 , L0000801 , L0000802 , L0000803 , L0000804
, L0000805 , L0000806 ,

L0000807 , L0000808 , L0000809 , L0000810 , L0000811 , L0000812
, L0000813 , L0000814 ,

L0000815 , L0000816 , L0000817 , L0000818 , L0000819 , L0000820
, L0000821 , L0000822 ,

L0000823 , L0000824 , L0000825 , L0000826 , L0000827 , L0000828
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, L0000837 , L0000838 ,

L0000839 , L0000840 , L0000841 , L0000842 , L0000843 , L0000844
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L0000984 , L0000985 , L0000986 , L0000987 , L0000988 , L0000989
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L0000992 , L0000993 , L0000994 , L0001018 , L0001019 , L0001020
, L0001021 , L0001022 ,

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

L0001023 , L0001024 , L0001025 , L0001026 , L0001027 , L0001028
, L0001029 , L0001030 ,

L0001031 , L0001032 , L0001033 , L0001034 , L0001035 , L0001036
, L0001037 , L0001038 ,

L0001039 , L0001040 ,

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)

(METERS)

(463379.0, 3772828.3, 375.4, 375.4, 0.0); (463378.7, 3772793.0, 375.0, 375.0, 0.0);
(463386.4, 3772775.1, 374.6, 374.6, 0.0); (463386.4, 3772739.3, 374.0, 374.0, 0.0);
(463446.7, 3772649.0, 372.4, 372.4, 0.0); (463521.8, 3772649.6, 372.8, 372.8, 0.0);
(463733.3, 3772861.0, 374.0, 374.0, 0.0); (463734.7, 3772804.1, 372.6, 372.6, 0.0);
(463733.2, 3772710.6, 371.0, 371.0, 0.0); (463734.0, 3772593.8, 370.0, 370.0, 0.0);
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(464006.0, 3772950.2, 374.5, 374.5, 0.0); (463491.4, 3773312.7, 382.6, 382.6, 0.0);
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(463439.9, 3772363.6, 367.9, 367.9, 0.0); (463438.5, 3772343.8, 367.2, 367.2, 0.0);
(463439.5, 3772308.7, 367.0, 367.0, 0.0); (463439.9, 3772282.1, 366.2, 366.2, 0.0);
(463438.5, 3772230.6, 365.5, 365.5, 0.0); (463403.7, 3772244.3, 366.0, 366.0, 0.0);

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(463404.1, 3772196.9, 365.2, 365.2, 0.0); (463404.8, 3772173.7, 365.0, 365.0, 0.0);
(463856.1, 3773300.9, 380.5, 380.5, 0.0); (463931.0, 3773300.4, 380.1, 380.1, 0.0);
(463911.2, 3773332.0, 381.0, 381.0,
0.0);

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1

```
           1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1
           1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1

               NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS
               INCLUDED IN THE DATA FILE.



                                    *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES
                                    ***
                                                          (METERS/SEC)

                                                      1.54,   3.09,   5.14,   8.23,  10.80,
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***       11:16:02

                      PAGE  20
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                                    *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

   Surface file:
   FONT_V9_ADJU\FONT_v9.SFC                                                    Met
   Version:  16216
   Profile file:
   FONT_V9_ADJU\FONT_v9.PFL
   Surface format:
   FREE

   Profile format:
   FREE

   Surface station no.:     3102                Upper air station no.:     3190
                 Name: UNKNOWN                                  Name:
                 UNKNOWN
                 Year:   2011                                   Year:   2011

 First 24 hours of scalar data
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS
 WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - -
 11 01 01   1 01  -18.5  0.194 -9.000 -9.000 -999.  204.     41.2  0.25   2.82   1.00    1.80
 69.    9.1  276.4    5.5
 11 01 01   1 02  -23.8  0.239 -9.000 -9.000 -999.  281.     63.0  0.25   2.82   1.00    2.20
 52.    9.1  275.4    5.5
 11 01 01   1 03  -18.5  0.194 -9.000 -9.000 -999.  205.     41.2  0.25   2.82   1.00    1.80
 32.    9.1  275.4    5.5
 11 01 01   1 04   -1.4  0.067 -9.000 -9.000 -999.   57.     18.3  0.25   2.82   1.00    0.40
 27.    9.1  274.2    5.5
 11 01 01   1 05  -18.6  0.194 -9.000 -9.000 -999.  204.     41.2  0.25   2.82   1.00    1.80
 51.    9.1  274.2    5.5
 11 01 01   1 06  -29.7  0.296 -9.000 -9.000 -999.  387.     96.6  0.25   2.82   1.00    2.70
 53.    9.1  274.2    5.5
 11 01 01   1 07  -24.0  0.239 -9.000 -9.000 -999.  282.     63.0  0.25   2.82   1.00    2.20
 70.    9.1  274.2    5.5
 11 01 01   1 08   -8.4  0.138 -9.000 -9.000 -999.  127.     27.3  0.25   2.82   0.54    1.30
 72.    9.1  275.4    5.5
 11 01 01   1 09   44.3  0.280  0.571  0.005  147.  356.    -43.5  0.25   2.82   0.32    2.20
 67.    9.1  277.5    5.5
 11 01 01   1 10  122.7  0.264  0.952  0.005  247.  326.    -13.2  0.25   2.82   0.25    1.80
 83.    9.1  279.9    5.5
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 11 01 01   1 11  179.8  0.316  1.733  0.005 1017.  426.    -15.4  0.25   2.82   0.22    2.20
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 11 01 01   1 12  206.0  0.320  1.940  0.008 1244.  435.    -14.0  0.25   2.82   0.21    2.20
 115.    9.1  283.1    5.5
 11 01 01   1 13  132.6  0.214  1.733  0.009 1377.  243.     -6.5  0.25   2.82   0.21    1.30
 147.    9.1  284.2    5.5
 11 01 01   1 14  147.0  0.216  1.818  0.009 1431.  242.     -6.0  0.25   2.82   0.23    1.30
 219.    9.1  284.9    5.5
 11 01 01   1 15  104.0  0.208  1.633  0.009 1468.  228.     -7.6  0.25   2.82   0.26    1.30
 126.    9.1  285.4    5.5
 11 01 01   1 16   26.4  0.140  1.037  0.009 1477.  127.     -9.1  0.25   2.82   0.35    0.90
 151.    9.1  284.9    5.5
 11 01 01   1 17   -9.0  0.137 -9.000 -9.000 -999.  121.     24.9  0.25   2.82   0.63    1.30
 69.    9.1  283.1    5.5
 11 01 01   1 18  -33.4  0.342 -9.000 -9.000 -999.  481.    129.0  0.25   2.82   1.00    3.10
 81.    9.1  281.4    5.5
 11 01 01   1 19  -33.6  0.342 -9.000 -9.000 -999.  481.    128.9  0.25   2.82   1.00    3.10
 51.    9.1  279.9    5.5
 11 01 01   1 20  -23.6  0.239 -9.000 -9.000 -999.  287.     63.1  0.25   2.82   1.00    2.20
 77.    9.1  278.8    5.5
 11 01 01   1 21  -18.5  0.194 -9.000 -9.000 -999.  205.     41.2  0.25   2.82   1.00    1.80
 53.    9.1  277.5    5.5
 11 01 01   1 22  -23.7  0.239 -9.000 -9.000 -999.  281.     63.0  0.25   2.82   1.00    2.20
 58.    9.1  277.5    5.5
 11 01 01   1 23  -18.5  0.194 -9.000 -9.000 -999.  205.     41.2  0.25   2.82   1.00    1.80
 64.    9.1  277.5    5.5
 11 01 01   1 24   -4.5  0.094 -9.000 -9.000 -999.   74.     16.3  0.25   2.82   1.00    0.90
 52.    9.1  277.0    5.5


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 11 01 01 01    5.5 0 -999.  -99.00   276.5   99.0  -99.00  -99.00
 11 01 01 01    9.1 1   69.    1.80  -999.0   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***        11:16:02

                      PAGE  21
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5 YEARS FOR
                   SOURCE GROUP: ALL      ***
                                 INCLUDING SOURCE(S):     L0000382    , L0000383    ,
                                 L0000384    , L0000385    , L0000386    ,
                 L0000387    , L0000388    , L0000389    , L0000390    , L0000391    ,
                 L0000392    , L0000393    , L0000394    ,
                 L0000395    , L0000396    , L0000397    , L0000398    , L0000450    ,
                 L0000451    , L0000452    , L0000453    ,
                 L0000454    , L0000455    , L0000456    , L0000457    , L0000458    ,
                 L0000459    , L0000460    ,  . . .      ,

                                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                    ** CONC OF DPM      IN
                                    MICROGRAMS/M**3                          **

       X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
       (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
         463378.96    3772828.26        0.00019                      463378.69
         3772793.02        0.00019
```

463386.40 3772775.13 0.00020 463386.40
3772739.34 0.00019
463446.69 3772649.04 0.00024 463521.85
3772649.59 0.00033
463733.28 3772861.02 0.00027 463734.68
3772804.07 0.00028
463733.22 3772710.63 0.00020 463733.95
3772593.84 0.00010
463613.62 3772559.94 0.00012 463577.42
3772560.70 0.00013
463661.63 3772875.07 0.00056 463661.63
3772854.12 0.00066
463447.10 3772589.66 0.00015 463445.63
3772439.14 0.00008
463438.27 3772414.27 0.00009 463474.28
3772439.93 0.00007
463519.03 3772441.72 0.00007 463552.85
3772441.32 0.00007
463391.53 3772427.40 0.00007 463401.67
3772414.67 0.00008
463377.80 3772436.35 0.00006 463384.58
3772595.15 0.00011
463384.20 3772515.88 0.00009 463609.49
3772441.03 0.00006
463632.07 3772444.33 0.00006 463664.01
3772442.13 0.00006
463683.83 3772440.75 0.00006 463710.26
3772441.03 0.00005
463732.56 3772441.58 0.00005 463762.57
3772441.85 0.00005
463796.99 3772440.75 0.00004 463536.81
3772423.68 0.00006
463439.62 3772386.24 0.00008 463609.77
3772390.37 0.00005
463566.54 3772406.89 0.00006 463008.94
3772845.41 0.00003
463009.09 3772819.82 0.00003 463008.80
3772793.95 0.00003
463008.66 3772766.50 0.00003 463008.94
3772744.36 0.00003
463008.94 3772721.80 0.00003 462951.59
3772791.94 0.00002
462972.58 3772845.26 0.00002 462949.58
3772767.93 0.00002
462952.89 3772743.36 0.00002 462950.88
3772718.35 0.00002
463190.81 3772849.27 0.00005 463190.46
3772814.75 0.00005
463163.43 3772704.78 0.00005 463163.05
3772674.67 0.00004
463168.77 3772530.60 0.00004 463169.15
3772504.68 0.00004
463002.51 3772905.19 0.00003 463005.32
3772955.99 0.00002
463007.90 3773002.10 0.00002 463344.51
3772923.68 0.00011
463094.00 3772923.21 0.00003 463344.62
3773184.91 0.00004
463343.03 3772961.20 0.00010 463344.09
3773220.78 0.00003
462927.81 3772926.91 0.00002 462917.25
3773075.16 0.00001
462820.70 3772925.85 0.00001 462945.74
3772844.07 0.00002
462919.89 3772843.02 0.00002 463804.85
3772951.49 0.00012

```
        464005.96    3772950.24        0.00005                     463491.39
        3773312.74         0.00003
        463542.29    3773312.12        0.00003                     463607.46
        3773313.36         0.00003
        463940.17    3772860.24        0.00007                     464302.66
        3772774.58         0.00002
        464302.04    3772504.57        0.00002                     463665.78
        3772387.21         0.00005
        463684.85    3772386.45        0.00004                     463712.67
        3772389.50         0.00004
        463767.19    3772382.64        0.00004                     463770.24
        3772407.80         0.00004
FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***        11:16:02

                     PAGE  22
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5 YEARS FOR
                   SOURCE GROUP: ALL      ***
                                 INCLUDING SOURCE(S):     L0000382    , L0000383    ,
                                 L0000384    , L0000385    , L0000386    ,
                 L0000387    , L0000388    , L0000389    , L0000390    , L0000391    ,
                 L0000392    , L0000393    , L0000394    ,
                 L0000395    , L0000396    , L0000397    , L0000398    , L0000450    ,
                 L0000451    , L0000452    , L0000453    ,
                 L0000454    , L0000455    , L0000456    , L0000457    , L0000458    ,
                 L0000459    , L0000460    ,  . . .      ,

                                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                      ** CONC OF DPM      IN
                                      MICROGRAMS/M**3                          **

       X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
       (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
        463838.09    3772443.25        0.00004                     463860.20
        3772441.35         0.00004
        463374.98    3772395.54        0.00006                     463377.09
        3772364.41         0.00005
        463439.87    3772363.59        0.00008                     463438.50
        3772343.81         0.00007
        463439.53    3772308.70        0.00007                     463439.87
        3772282.11         0.00007
        463438.50    3772230.64        0.00006                     463403.73
        3772244.28         0.00006
        463404.07    3772196.89        0.00006                     463404.76
        3772173.71         0.00006
        463856.14    3773300.88        0.00003                     463931.04
        3773300.37         0.00003
        463911.17    3773331.96
        0.00002

FF *** AERMOD - VERSION 21112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14014 Durst
Rialto\14014 Ops\14 ***        01/04/22
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***        11:16:02

                     PAGE  23
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                                   *** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER   5
```

YEARS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

NETWORK GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.00066 AT (463661.63, 3772854.12, 374.24, 374.24, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.00056 AT (463661.63, 3772875.07, 374.90, 374.90, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.00033 AT (463521.85, 3772649.59, 372.77, 372.77, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.00028 AT (463734.68, 3772804.07, 372.59, 372.59, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.00027 AT (463733.28, 3772861.02, 374.00, 374.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.00024 AT (463446.69, 3772649.04, 372.42, 372.42, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.00020 AT (463386.40, 3772775.13, 374.63, 374.63, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.00020 AT (463733.22, 3772710.63, 371.00, 371.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.00019 AT (463378.96, 3772828.26, 375.40, 375.40, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.00019 AT (463386.40, 3772739.34, 374.00, 374.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 7 Warning Message(s)
A Total of 838 Informational Message(s)

A Total of 43848 Hours Were Processed

A Total of 40 Calm Hours Identified

A Total of 798 Missing Hours Identified (1.82 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

```
   ********   WARNING MESSAGES   ********
ME W186     852       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
ME W187     852       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
MX W438    8800        METQA: Convective Velocity Data Out-of-Range.  KURDAT =       12010216
MX W438   11536        METQA: Convective Velocity Data Out-of-Range.  KURDAT =       12042516
MX W420   16779        METQA: Wind Speed Out-of-Range.   KURDAT =                   12113003
MX W450   26305       CHKDAT: Record Out of Sequence in Meteorological File at:     15010101
MX W450   26305       CHKDAT: Record Out of Sequence in Meteorological File at:    1 year gap

   ***********************************
   *** AERMOD Finishes Successfully ***
   ***********************************
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APPENDIX 2.4:

RISK CALCULATIONS

Table 1
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
0-2 Age Bin Exposure Scenario - Construction Activity

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00746	7.46E-06	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	5.6E-06	4.9E-07	5.0E+00	1.4E-03	1.5E-03							
TOTAL								4.9E-07			1.5E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

0.49

** Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	250
exposure duration (years)	0.68
inhalation rate (L/kg-day))	1090
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.85
age sensitivity factor (0 to 2 years old)	10

Table 3
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
2-16 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00009	9.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	4.9E-08	2.1E-08	5.0E+00	1.4E-03	1.8E-05							
TOTAL								2.1E-08			1.8E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

0.02

** Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	13.23
inhalation rate (L/kg-day))	572
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.72
age sensitivity factor (ages 2 to 16 years	3

Table 4
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
16-30 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00009	9.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	2.3E-08	3.5E-09	5.0E+00	1.4E-03	1.8E-05							
TOTAL								3.5E-09			1.8E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
								0.00										

** Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	14
inhalation rate (L/kg-day))	261
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.73
age sensitivity factor (ages 16 to 30 years old)	1

Total Risk for All Age Bins (per million) 0.51

Table 1
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
-0.25 to 0 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00009	9.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	3.1E-08	9.9E-10	5.0E+00	1.4E-03	1.8E-05							
TOTAL								9.9E-10			1.8E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

** Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	0.25
inhalation rate (L/kg-day))	361
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.85
age sensitivity factor (age third trimester	10

Table 2
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
0-2 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00009	9.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	9.4E-08	2.4E-08	5.0E+00	1.4E-03	1.8E-05							
TOTAL								2.4E-08			1.8E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

** Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	2
inhalation rate (L/kg-day))	1090
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.85
age sensitivity factor (0 to 2 years old)	10

Table 3
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
2-16 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00009	9.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	4.9E-08	2.2E-08	5.0E+00	1.4E-03	1.8E-05							
TOTAL								2.2E-08			1.8E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

** Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	14
inhalation rate (L/kg-day))	572
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.72
age sensitivity factor (ages 2 to 16 years	3

Table 4
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
16-30 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			$(ug/m^3)^{-1}$	$(mg/kg/day)^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00009	9.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	2.3E-08	3.5E-09	5.0E+00	1.4E-03	1.8E-05							
TOTAL								3.5E-09			1.8E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
								0.00										

** Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	14
inhalation rate (L/kg-day))	261
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.73
age sensitivity factor (ages 16 to 30 years old)	1

Total Risk for All Age Bins (per million) **0.05**

Table 5
Quantification of Carcinogenic Risks and Noncarcinogenic Risks
25-Year Worker Exposure Scenario

	Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**									
						URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
		(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	($mg/kg/day$)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
1	Diesel Particulates	6.60E-04	6.60E-07	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	1.0E-07	3.9E-08	5.0E+00	1.4E-03	1.3E-04							
	TOTAL								3.9E-08			1.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
									0.04										

** Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	250
exposure duration (years)	25
inhalation rate (L/kg-day))	230
inhalation absorption factor	1
averaging time (years)	70

Table 6
Quantification of Carcinogenic Risks and Noncarcinogenic Risks
9-Year School Child Exposure Scenario

	Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**									
						URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
		(ug/m^3)	(mg/m^3)			$(ug/m^3)^{-1}$	$(mg/kg/day)^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
1	Diesel Particulates	3.00E-05	3.00E-08	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	8.5E-09	3.4E-09	5.0E+00	1.4E-03	6.0E-06							
	TOTAL								3.4E-09 0.003			6.0E-06	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

** Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	180
exposure duration (years)	9
inhalation rate (L/kg-day))	572
inhalation absorption factor	1
averaging time (years)	70
age sensitivity factor (ages 4-13)	3

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August 9, 2021

David Ornelas
T&B Planning, Inc.
3200 El Camino Real, Suite 100
Irvine, California 92602

RE: Cultural Resources Records Search Results for the Cedar Commerce Center Project, Rialto, California

Dear Mr. Ornelas:

An archaeological records search has been completed for the Cedar Commerce Center Project located northeast of the intersection of Cedar Avenue and Durst Drive, at 1230 West Durst Drive in the city of Rialto, San Bernardino County, California. The project proposes the construction of a warehouse within Assessor's Parcel Numbers (APN) 0128-062-25 to -27. As part of the environmental review process, Brian F. Smith and Associates, Inc. (BFSA) reviewed the results of the records search requested from the South Central Coastal Information Center (SCCIC) at California State University, Fullerton. The records search, which was completed on August 6, 2021, encompassed an area of one mile surrounding the project.

The records search identified 19 previous studies within a one-mile radius of the project, one of which included a small portion of the subject property[1]. The previous study was conducted in 2004 for a Cingular Wireless facility. This previous study did not identify any cultural resources; however, the study only included the far southeastern corner of the current project. In addition, the records search found that no resources are recorded within the subject property. However, the search did identify one resource within one mile of the project. The previously recorded resource is a historic single-family residence at 1391 Merrill Avenue.

The full results of the completed SCCIC records search are attached to this letter report

[1] Fulton, Terri And Caprice D. Harper
2004 Cultural Resources Assessment: Cingular Wireless Facility No. SB 289-02, City Of Rialto, San Bernardino County, CA. LSA Associates. Unpublished report on file at the South Central Coastal Information Center at California State University, Fullerton, Fullerton, California.

(Attachment A). Please contact us should you have any questions or require additional study for this project.

Regards,



Brian F. Smith
BFS:ag
Attachment:

Attachment A – SCCIC Archeological Records Search Results

ATTACHMENT A

SCCIC Archaeological Records Search Results

South Central Coastal Information Center
California State University, Fullerton
Department of Anthropology MH-426
800 North State College Boulevard
Fullerton, CA 92834-6846
657.278.5395 / FAX 657.278.5542
sccic@fullerton.edu
California Historical Resources Information System
Orange, Los Angeles, and Ventura Counties

8/5/2021 Records Search File No.: 22523.8748

Andrew Garrison
Brian F Smith and Associates
14010 Poway Road, Suite A
Poway, CA 92064

Re: Record Search Results for the Cedar Commerce Center (21-136)

The South Central Coastal Information Center received your records search request for the project area referenced above, located on the Fontana, CA USGS 7.5' quadrangle(s). Due to the COVID-19 emergency, we have implemented new records search protocols, which limits the deliverables available to you at this time. **WE ARE ONLY PROVIDING DATA THAT IS ALREADY DIGITAL AT THIS TIME.** Please see the attached document on COVID-19 Emergency Protocols for what data is available and for future instructions on how to submit a records search request during the course of this crisis. If your selections on your data request form are in conflict with this document, we reserve the right to default to emergency protocols and provide you with what we stated on this document. You may receive more than you asked for or less than you wanted. The following reflects the results of the records search for the project area and a 1-mile radius:

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☒ custom GIS maps ☐ shape files ☐ hand-drawn maps

Resources within project area: 0	None
Resources within 1-mile radius: 1	SEE ATTACHED MAP or LIST
Reports within project area: 1	SB-04246
Reports within 1-mile radius: 18	SEE ATTACHED MAP or LIST

Resource Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed
Resource Database Printout (details):	☐ enclosed	☒ not requested	☐ nothing listed
Resource Digital Database (spreadsheet):	☒ enclosed	☐ not requested	☐ nothing listed
Report Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed
Report Database Printout (details):	☐ enclosed	☒ not requested	☐ nothing listed
Report Digital Database (spreadsheet):	☒ enclosed	☐ not requested	☐ nothing listed
Resource Record Copies:	☒ enclosed	☐ not requested	☐ nothing listed
Report Copies:	☐ enclosed	☐ not requested	☐ nothing listed

☒ not scanned

OHP Built Environment Resources Directory (BERD) 2019: ☒ available online; please go to https://ohp.parks.ca.gov/?page_id=30338

Archaeo Determinations of Eligibility 2012: ☐ enclosed ☐ not requested ☒ nothing listed

Historical Maps: ☒ not available at SCCIC; please go to https://ngmdb.usgs.gov/topoview/viewer/#4/39.98/-100.02

Ethnographic Information: ☒ not available at SCCIC

Historical Literature: ☒ not available at SCCIC

GLO and/or Rancho Plat Maps: ☒ not available at SCCIC

Caltrans Bridge Survey: ☒ not available at SCCIC; please go to http://www.dot.ca.gov/hq/structur/strmaint/historic.htm

Shipwreck Inventory: ☒ not available at SCCIC; please go to http://shipwrecks.slc.ca.gov/ShipwrecksDatabase/Shipwrecks_Database.asp

Soil Survey Maps: (see below) ☒ not available at SCCIC; please go to http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System,

Isabela Kott
Assistant Coordinator, GIS Program Specialist

Enclosures:

(X) Covid-19 Emergency Protocols for San Bernardino County Records Searches – 2 pages

(X) Custom Maps – 2 pages

(X) Resource Database Printout (list) – 1 page

(X) Resource Digital Database (spreadsheet) – 1 line

(X) Report Database Printout (list) – 3 pages

(X) Report Digital Database (spreadsheet) – 19 lines

(X) Resource Record Copies – (all) 6 pages

Emergency Protocols for San Bernardino County Records Searches

These instructions are for qualified consultants with a valid Access and Use Agreement.

WE ARE ONLY PROVIDING DATA THAT IS ALREADY DIGITAL AT THIS TIME. WE ARE NOT PROVIDING SHAPEFILE DATA FOR SAN BERNARDINO COUNTY; YOU WILL ONLY RECEIVE A CUSTOM DIGITAL MAP.

We can only provide you information that is already in digital format; therefore, your record search may or may not be complete. Some records are only available in paper formats and so may not be available at this time. This also means that there may be data missing from the database bibliographies; locations of resource and report boundaries may be missing or mis-mapped on our digital maps; and that no pdf of a resource or report is available or may be incomplete.

As for the GIS mapped data, bibliographic databases, and pdfs of records and reports; not all the data in our digital archive for San Bernardino County was processed by SCCIC, therefore, we cannot vouch for its accuracy. Accuracy checking and back-filling of missing information is an on-going process under normal working conditions and cannot be conducted under the emergency protocols.

This is an extraordinary and unprecedented situation. Your options will be limited so that we can help as many of you as possible in the shortest amount of time. You may not get everything you want and/or you may get more than you want. We appreciate your patience and resilience.

Please send in your request via email using the data request form along with the associated shape files and pdf map of the project area. If you have multiple SBCO jobs for processing, you may not get them all back at the same time. Use this data request form:

http://web.sonoma.edu/nwic/docs/CHRISDataRequestForm.pdf

Please make your selections on the data request form based on the following instructions.

1. Keep your search radius as tight as possible, but we understand if you have a requirement. The wider the search radius, the higher the cost. You are welcome to request a Project area only search, but please make it clear on the request form that that is what you are seeking.

2. You will get custom maps of resource locations for the project area and the radius that you choose. We will only be providing maps of report locations for the project area and up to a ¼-mile radius. If you need bibliographic information for more than ¼-mile radius – you will be charged for all report map features within your selected search radius. You can opt out of having us create custom maps but you still pay for the map features in the project area or the selected search radius if you want the associated bibliographic information or pdfs of resources or reports.

3. You can request copies of site records and reports if they are digitally available.

4. You will also get the bibliographies (List, Details, Spreadsheet) that you choose for resources and reports. Because the bibliographic database is not yet complete, you will only get what is available at the time of your records search.
5. If you request more than what we are offering here, we may provide it if it is available or we reserve the right to default to these instructions. If you want copies of resources and reports that are not available digitally at the time of the search, you can send us a separate request for processing when we are allowed to return to the office. Fees will apply.

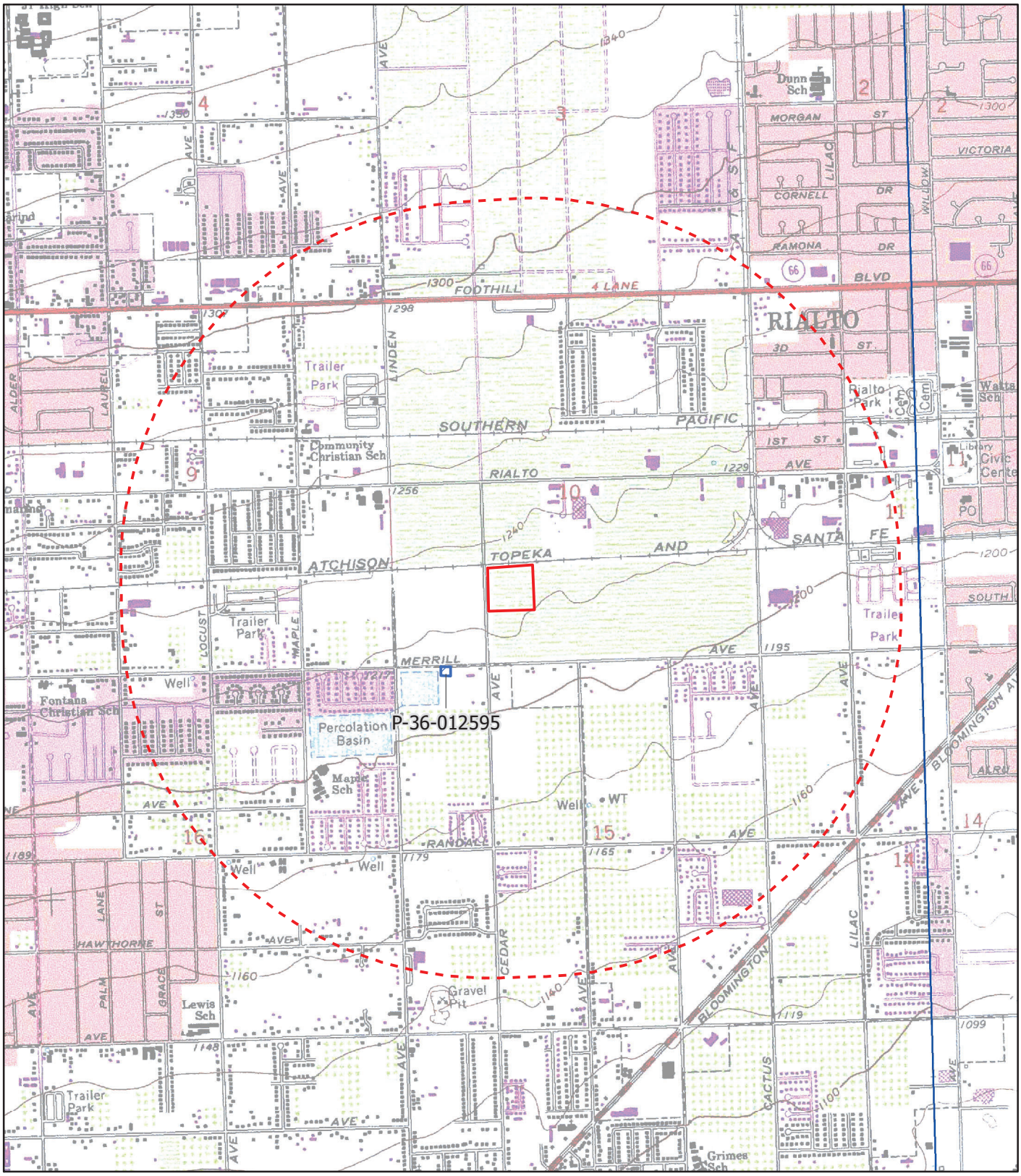
6. **You will need to search the OHP BERD yourself for your project area and your search radius.** This replaces the old OHP HPD. It is available online at the OHP website.

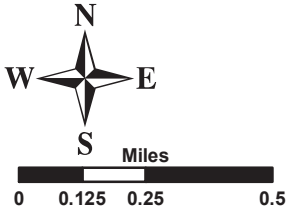
7. You can go online to find historic maps, so we are not providing them at this time.

8. Your packet will be sent to you electronically via Dropbox. We use 7-zip to password protect the files so you will need both on your computers. We email you the password. If you can't use Dropbox for some reason, then you will need to provide us with your Fed ex account number and we will ship you a disc with the results. As a last resort, we will ship on a disc via the USPS. You may be billed for our shipping and handling costs.

9. We will be billing you at the staff rate of $150 per hour and you will be charged for all resources and reports according to the "custom map charges", even if you don't get a custom or hand-drawn map. You will also be billed 0.15 per pdf page, as usual. Quad fees will apply if your research includes more than 2 quads. The fee structure for custom maps was designed to mimic the cost of doing the search by hand so the fees are comparable.

10. A copy of the digital fee structure is available on the Office of Historic Preservation website under the CHRIS tab. If the digital fee structure is new to you or you don't understand it; please ask questions before we process your request, not after. Thank you.





Resources within the project area: None
1 resource within a 1-mile radius

Fontana, CA
USGS 7.5' PR: 1980
1:24,000
INV #22523
July 2021

South Central Coastal Information Center

May depict confidential cultural resource locations. Do not distribute.

All listed resources have been previously verified by SCCIC staff.

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-36-012595		Resource Name - Sprint Telecom Fac Candidate SB60XC817A; OHP Property Number - 152580	Building	Historic	HP02	2004 (TANIGUCHI, MBA)	SB-04866

10064866 8/06

State of California— The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # 36-012595
HRI #
Trinomial
NRHP Status Code 6Y

Other Listings
Review Code Reviewer Date

 *Resource Name or #: Sprint Telecommunications Facility Candidate SB60XC817A: 1391 Merrill Avenue

P1. Other Identifier:

*P2. Location: ☐ Not for Publication ☒ Unrestricted and

*a. County: San Bernardino

*b. USGS 7.5' Quad: FONTANA Date: T 1S ; R 5W ; NW ¼ of NW ¼ of Sec 15 ; SB B.M.

c. Address: 1391 Merrill Avenue City: Rialto Zip: 92376

d. UTM: Zone: 10 ; mE/ mN (G.P.S.)

e. Other Locational Data: APN: 0250-011-027-0000 (with the 2002 purchase of this building by the current owner, the property was merged with its surrounding APN. Formerly, it was this separate APN: 0250-011-013-0000) Elevation:

*P3a. Description:

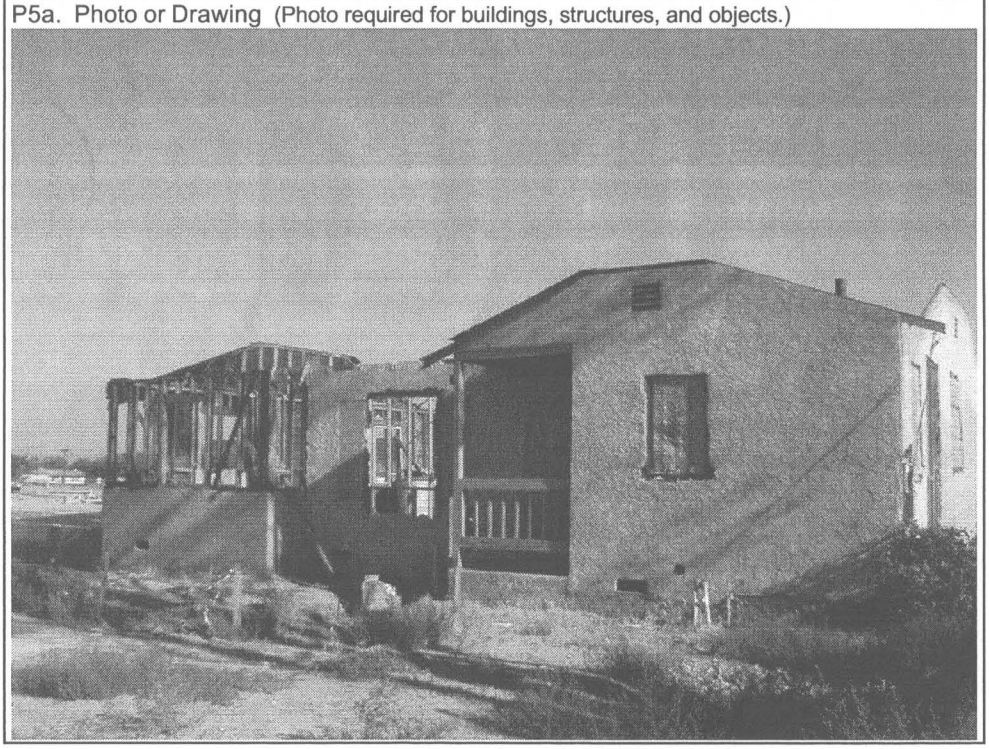
(Note: Beginning some time after March, 2004, construction began on the building to convert it into a student activity center for the nearby Calvary Chapel of Rialto. The following description refers primarily to the building's existing condition, but also makes some reference to its original appearance, done using photographs taken in circa 1983 and March, 2004.)

(continued on page 2)

*P3b. Resource Attributes: HP2. Single family property

*P4. Resources Present: ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: View looking southeast at the façade, July 9, 2004

*P6. Date Constructed/Age and Sources: ☒Historic ☐Prehistoric ☐Both
circa early to mid-1950s, based on visual examination of photographs taken before the current alterations.

*P7. Owner and Address:
Calvary Chapel of Rialto
P. O. Box 2120
Rialto, CA 92377

**P8. Recorded by:
Christeen Taniguchi
Michael Brandman Associates
220 Commerce, Suite #200
Irvine, CA 92602

*P9. Date Recorded:
June 25, 2004

*P10. Survey Type: Section 106 compliance evaluation

*P11. Report Citation: none

*Attachments: ☐NONE ☐Location Map ☐Sketch Map ☒Continuation Sheets ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

(continued from page 1)

***P3a. Description:**

This single-family residence was constructed in circa early to mid-1950s in the Minimal Traditional style. It has an irregular plan with an asymmetrical façade. The building has a concrete block foundation. The roof has been taken down, but it likely had asphalt shingles with overhanging eaves. It also appears that the house had a hipped roof. The east-most section of the façade, however, had a gabled roof. Only the façade and the west elevation currently remain. These extant exterior walls are clad with a non-original highly textured stucco; the building would have originally had a less textured stucco surface. There are vents located just below the roof on these remaining wall surfaces. Most of the architectural details have been removed. Two of the three windows at the façade originally had faux shutters, which are indicative of the Minimal Traditional style. The east most window at the façade was surrounding by horizontal wood board details, with vertical board-and-batten boards located within the gabled roof above. All three windows were wood double hung sash. At the rear of the property there was a sliding glass door that was most likely original to the house. At the west side of the building, there was a secondary side entrance into the house. The windows and doors have all been removed. The original rectangular porch support and its associated railing still exist at the primary entrance. A concrete slab is currently being added onto the east end of the building. The condition of the building is poor, although this is due to the fact that it is currently undergoing intense construction.

State of California— The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # 36-012595
HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code 6Y

*Resource Name or # Sprint Telecommunications Facility Candidate SB60XC817A: 1391 Merrill Avenue

B1. Historic Name: unknown
B2. Common Name: unknown
B3. Original Use: single-family residence
B4. Present Use: undergoing construction to convert into a student activity center (for the nearby Calvary Church)
***B5. Architectural Style:** Minimal Traditional
***B6. Construction History:** The building was likely constructed some time during the early to mid-1950s.
***B7. Moved?** ☐ No ☒Yes ☐Unknown
Date: 1983 (as per City of Rialto building permit no. 51778 from December 13, 1983 and variance no. 581 from 1983)
Original Location: unknown. Fontana-based AA-Jet House Movers moved the building. The house was temporarily stored at their facilities, located at 14973 Slover Avenue, while the current location was being prepared.
***B8. Related Features:** None. A detached garage, located to the east of the house, was demolished in 2003. It may have been newly constructed when the house was moved in 1983, since no reference to the move of a garage could be found in the city Building Division files.

B9a. Architect: unknown b. Builder: unknown
***B10. Significance: Theme:** suburban residential architecture **Area:** unknown
Period of Significance: 1950s **Property Type:** single-family residence **Applicable Criteria:** N/A

This single-family residence was likely constructed some time between the early to mid-1950s. The building was moved to its current location in 1983. The variance file for the moving of this building is located at the City of Rialto's Building Division. The information does not indicate the original location of the house. In addition, no information could be found that pertains to the construction of the house, or its history associated with its original location. However, a photograph located in the variance file, taken of the house at its original location, shows a house number of "5328." John and Alberta Keefe, and Elmer Valpy were the owners at the time of the move, and were responsible for its move. They acquired the property in 1983. Valpy continued to co-own the property until 1985. In that year, the Keefes became co-owners with Diana and Eugene Morales. In 1989, the Moraless were no longer involved with the property, making the Keefes sole owners. In 1999, the property was then transferred to Chad Lindstrom.

In 2002, the Calvary Chapel of Rialto became the owners. This property was incorporated into the adjacent parcel owned and occupied by the Chapel. In 2003, the Chapel filed a building permit to convert this single-family residence into their Student Activity Center. The Chapel's plans initially involved converting the detached garage for the residence into a fellowship room. Instead, the garage was demolished in 2003. The house itself is currently undergoing extensive alterations. The interior has been

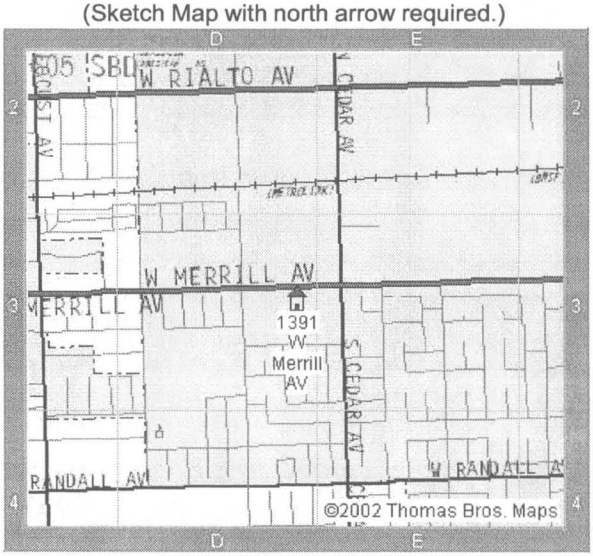
(continued on page 4)

B11. Additional Resource Attributes: HP2. Single family property
***B12. References:**
City of Rialto, Building Division, building permits and variance file.
San Bernardino County Archives.
San Bernardino County Assessor.
B13. Remarks:

***B14. Evaluator:**
Christeen Taniguchi
Michael Brandman Associates
220 Commerce, Suite #200
Irvine, CA 92602
*Date of Evaluation: June 25, 2004

(This space reserved for official comments.)

(Sketch Map with north arrow required.)



North is up

*Required information

(continued from page 3)

gutted out, and only sections of the exterior walls, the porch and the foundation remain. Remaining exterior details, such as the shutters and wood boards, have been removed. In addition, a slab addition is currently being installed at the east end of the house.

Before the Keefes, William and Eleanor Nunez owned the property on which the house was moved onto (from 1981 until 1983). They had obtained the undeveloped land from Southern California Edison, Company (SCE), who had owned it since 1964. According to the property variance documentation, SCE had originally hoped to build a substation at this location, but this never came to pass. SCE had acquired the property from California Electrical Power Company, who were the owners from 1957 to 1964.

National Register of Historic Places Eligibility Evaluation

In regard to the seven aspects of integrity of location, design, setting, materials, workmanship, feel and association, the building on this property no longer has its original location, setting and association. The building was moved to its current location in 1983. It was likely originally situated in a residential neighborhood, possibly with other similar suburban 1950s tract housing. The original location is not known. The building was moved onto an undeveloped parcel, with no other buildings surrounding it. The building also no longer retains its overall feeling, design, materials and workmanship. Intensive construction recently began to adapt the building to a new use. The roof and two of the exterior walls have been torn down, and the interior has been gutted. Exterior character defining features have been taken down. Its detached garage was demolished in 2003. The integrity level of the property is extremely low.

The property was assessed under National Register Criterion A for its potential significance as part of a historic trend that may have made a significant contribution to the broad patterns of our history. Research for this assessment did not uncover any historical information associated with its period of significance. This building is typical of a type of single-family residence that was widely constructed during the 1950s. It was likely part of the extensive suburban growth occurring in southern California during the period after World War II. It is not likely that there will be any significant historic trend associated with this property. Therefore, the property does not appear to qualify for the National Register of Historic Places (NRHP) under Criterion A.

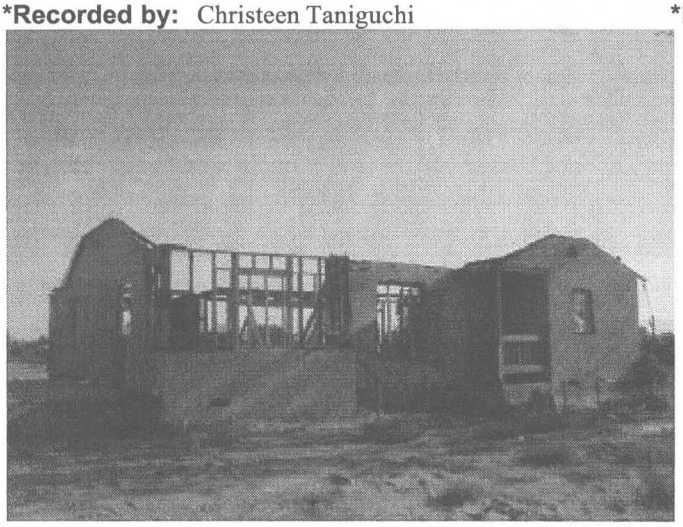
The property was considered under Criterion B for its association with the lives of persons significant in our past. Research for this assessment did not reveal any names associated with the building during its period of significance. As noted above under Criterion A, this is a typical of a type of single-family residence that was widely constructed during the 1950s. It is not likely that any persons associated with the property are significant. Therefore, the property does not appear to qualify for the National Register of Historic Places (NRHP) under Criterion B.

The property was evaluated for Criterion C for embodying the distinctive characteristics of a type, period, or method of construction, or representing the work of a master, or possessing high artistic values, or representing a significant and distinguishable entity whose components may lack individual distinction. As noted above, the integrity level for the property is extremely low. Not only has the building been moved, but it has also been significantly altered due to some ongoing intensive construction work. This building does not have distinctive characteristics of any type, period or method of construction. In addition, the building stands on its own, and so is not associated with a potential historic district. The architect and builder for this property are unknown. Therefore, the property does not appear to qualify for the National Register of Historic Places (NRHP) under Criterion C.

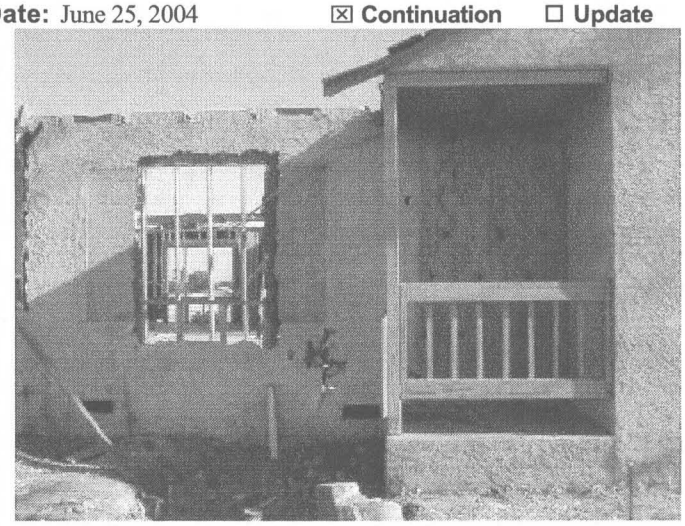
The property was considered for Criterion D for the potential to yield, or may be likely to yield, information important to prehistory or history. In order for buildings, structures, and objects to be eligible under this criterion, they would need to "be, or must have been, the principal source of important information." This is not the case with this property. Therefore, the property does not appear to qualify for the National Register of Historic Places (NRHP) under Criterion D.

In summary, the property does not appear to qualify for the NRHP under these criteria. Therefore, the building is not a historic resource for the purposes of NHPA. The property was not assessed for California Register or local designation eligibility.

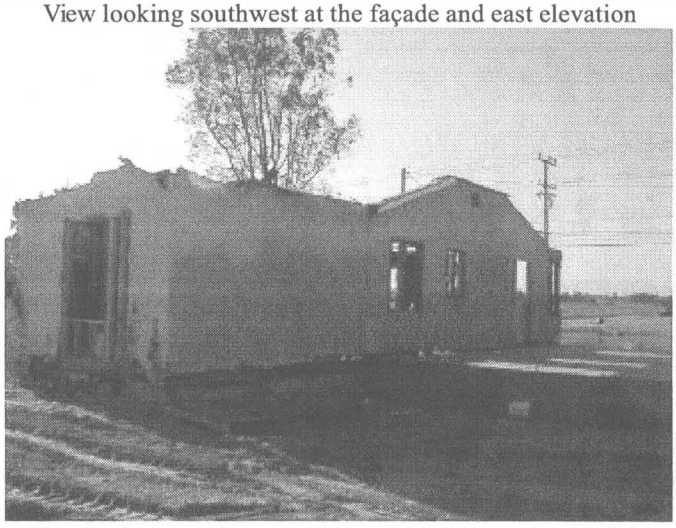
CONTINUATION SHEET



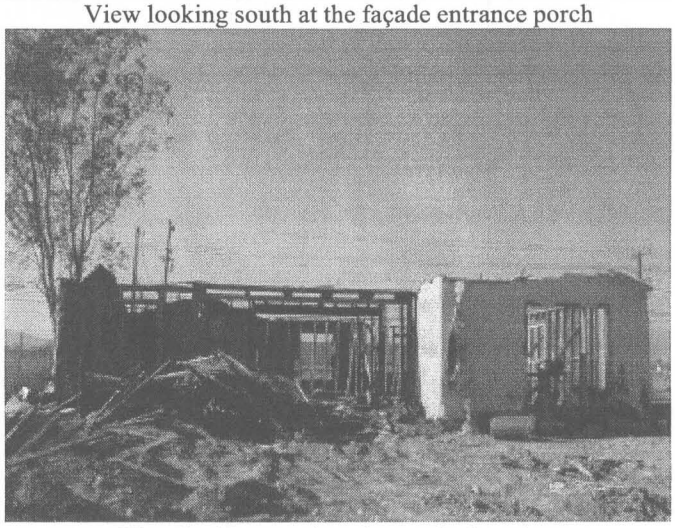
View looking southwest at the façade and east elevation



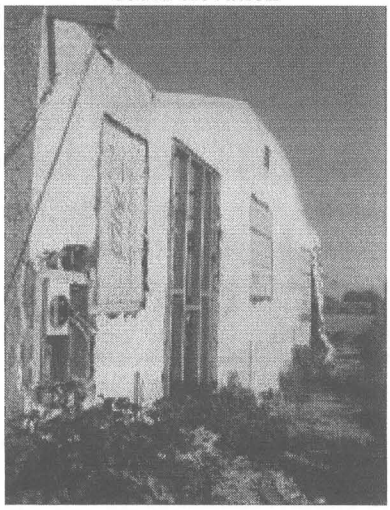
View looking south at the façade entrance porch



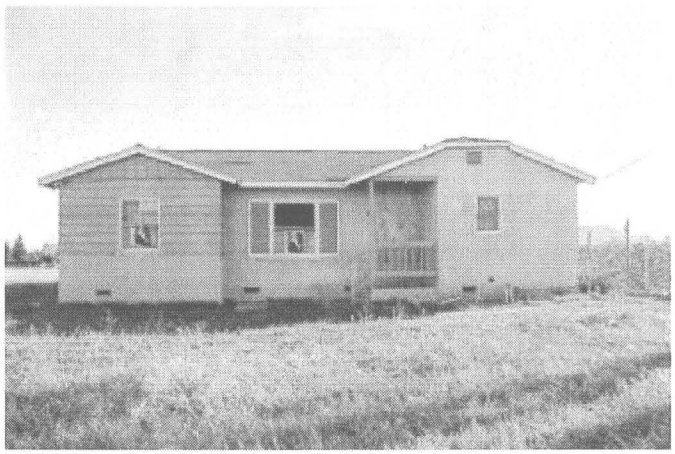
View looking northwest at the east elevation and part of the south elevation



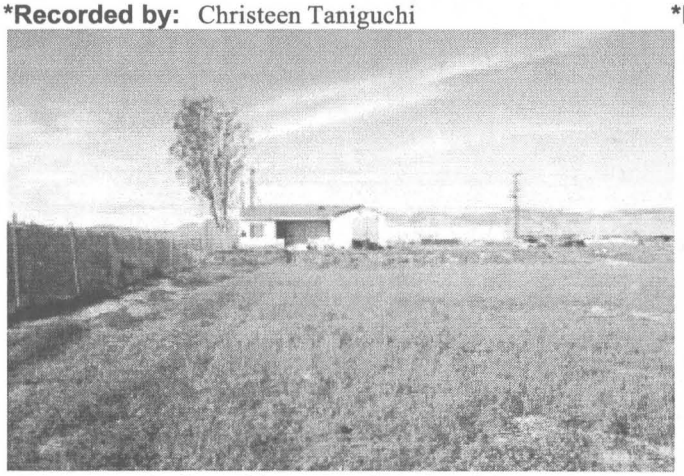
View looking north at the south elevation



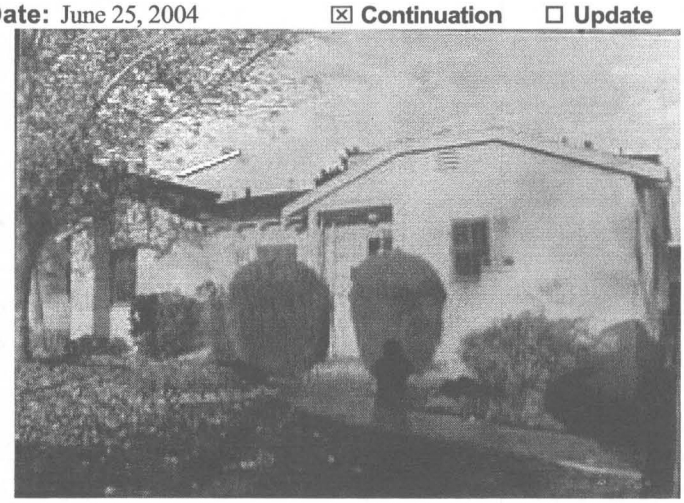
View looking southeast at the west elevation



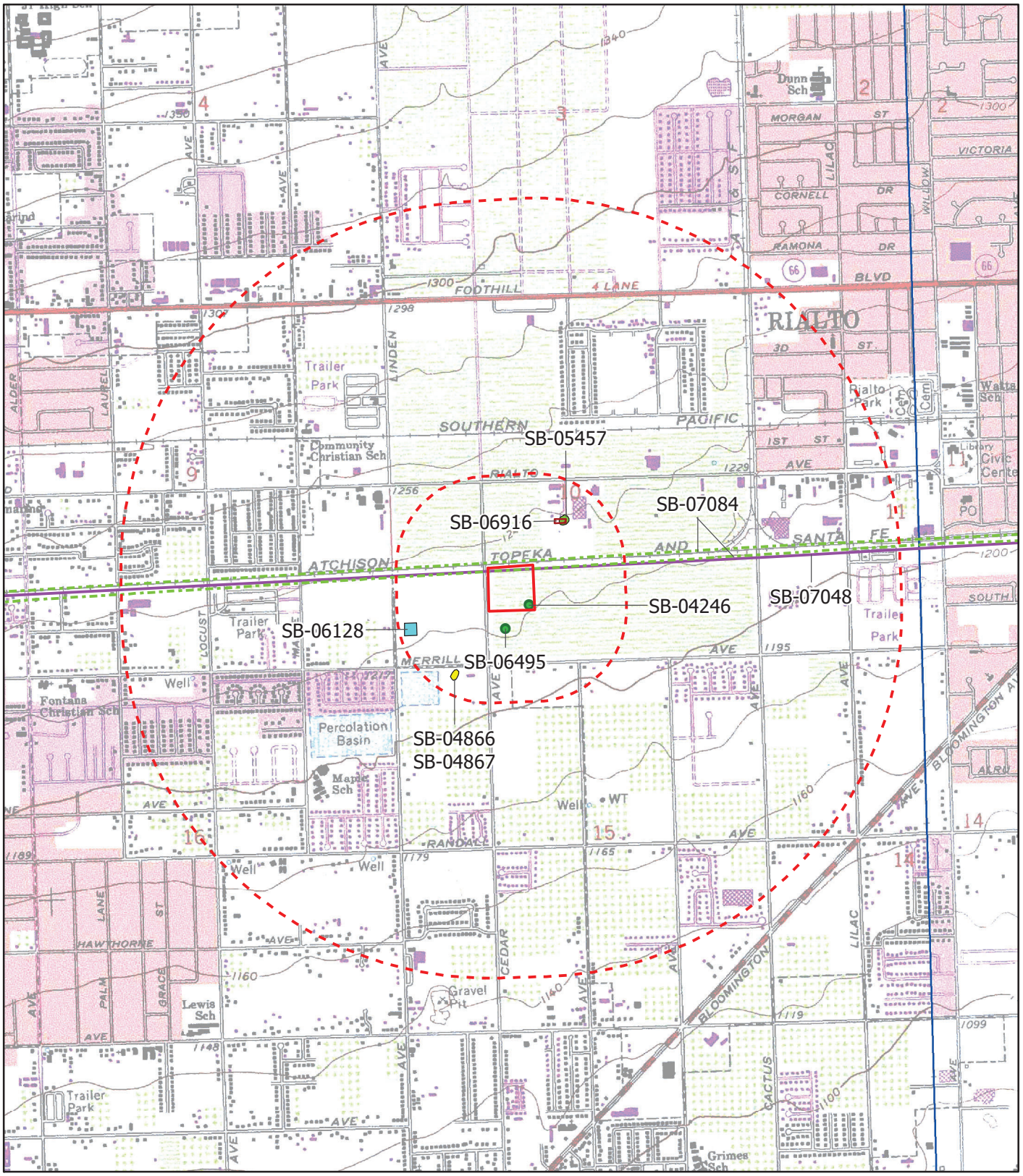
View looking south at the façade. Photograph taken just before current alterations began. (photographer: Laura S. White, March 1, 2004)



Distant north view of the south elevation. Photograph taken just before current alterations began. (photographer: Laura S. White, March 1, 2004)



View of the house at its original location, likely taken just before it was moved circa 1983 (City of Rialto, Building Division, variance file)



N
W E
S
Miles
0 0.125 0.25 0.5

Reports within the project area: SB-04246
18 additional reports within a 1-mile radius
(Reports are only mapped within a 1/4-mile radius)

Fontana, CA
USGS 7.5' PR: 1980
1:24,000
INV #22523
July 2021

South Central Coastal Information Center

May depict confidential cultural resource locations. Do not distribute.

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-02621	NADB-R - 1062621; Voided - 92-2.20A-B	1992	ALEXANDROWICZ, J. STEVEN, ANNE Q. DUFFIELD-STOLL, JEANETTE A. MCKENNA, SUSAN R. ALEXANDROWICZ, ARTHUR A. KUHNER, and ERIC SCOTT	CULTURAL AND PALEONTOLOGICAL RESOURCES INVESTIGATIONS WITHIN THE NORTH FONTANA INFRASTRUCTURE AREA, CITY OF FONTANA, SAN BERNARDINO COUNTY, CALIFORNIA	ARCHAEOLOGICAL CONSULTING SERVICES	36-004296, 36-006110, 36-006111, 36-006251, 36-006583, 36-006584, 36-006585, 36-006586, 36-006587, 36-006588, 36-006589, 36-006807, 36-006808, 36-006809, 36-006810, 36-006811, 36-006812, 36-006813, 36-006814, 36-006815, 36-006816
SB-03897	NADB-R - 1063897	2003	MCKENNA, JEANETTE A.	A PHASE I CULTURAL RESOURCE INVESTIGATION OF THE FONTANA UNIFIED SCHOOL DISTRICT ELEMENTARY SCHOOL #29 IN THE CITY OF RIALTO, SAN BERNARDINO COUNTY, CA. 40PP	MCKENNA ET AL	
SB-04246	NADB-R - 1064246	2004	FULTON, TERRI and CAPRICE D. HARPER	CULTURAL RESOURCES ASSESSMENT: CINGULAR WIRELESS FACILITY NO. SB 289-02, CITY OF RIALTO, SAN BERNARDINO COUNTY, CA. 15PP	LSA	
SB-04251	NADB-R - 1064251	2000	WHITE, LAURIE S.	CULTURAL RESOURCES ASSESSMENT FOR AT&T WIRELESS SITE #C957 (FOOTHILL & RIVERSIDE) CITY OF RIALTO, SAN BERNARDINO COUNTY, CA. 7PP	ARCHAEOLOGICAL ASSOCIATES	
SB-04254	NADB-R - 1064254	2004	MCKENNA, JEANETTE A.	A PHASE I CULTURAL RESOURCES INVESTIGATION OF TEH FONTANA UNIFIED SCHOOL DISTRICT ELEMENTARY SCHOOL #32 (8.43 ACRES), IN THE CITY OF FONTANA, SAN BERNARDINO COUNTY, CA. 34PP	MCKENNA ET AL	
SB-04259	NADB-R - 1064259	2003	ROMANI, JOHN	NEGATIVE ARCHAEOLOGICAL SURVEY & SUPPLEMENTAL REPORT: YARD 3, ARROW ROUTE AT LOCUST AVE, FONTANA, SAN BERNARDINO COUNTY, CA. 11PP	COMPASS ROSE	
SB-04362	NADB-R - 1064362	2001	HATHEWAY, ROGER G. and FRED E. BUDINGER	ARCHITECTURAL & ARCHAEOLOGICAL EVALUATION OF 14 STRUCTURES IN THE CITY OF RIALTO, CA IN SUPPORT OF PROPOSED SEISMIC RETROFITTING. 185PP	TETRA TECH	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-04866	NADB-R - 1064866	2004	DICE, MICHEAL	RECORDS SEARCH RESULTS AND SITE FOR SPRINT TELECOMMUNICATIONS FACILITY SB60XC817A (CALVARY CHAPEL), 592 SOUTH CEDAR AVENUE, RIALTO, SAN BERNADINO COUNTY, CALIFORNIA		36-012595
SB-04867	NADB-R - 1064867	2004	TANIGUCHI, CHRISTEEN	HISTORIC ARCHITECTURAL ASSESMENT FOR SPRINT TELECOMMUNICATIONS FACILITY SB60XC817A (CALVARY CHAPEL) 592 SOUTH CEDAR AVENUE, RIALTO, SAN BERNADINO COUNTY CALIFORNIA		
SB-05457		2007	Byrd, Brian F. and John E. Berg	Data Recovery Investigations at CA-SBR-847/H and CA-SBR-8379/H, National Training Center, Fort Irwin, San Bernardino County, California		
SB-05498	Caltrans - ; NADB-R - 1065498	2003	Hammond, Christie	Historical Resources Compliance Report for Relinquishment of State Route 66 (Foothill Boulevard), City of Fontana, San Bernardino County, California.	Caltrans District 8	36-002910
SB-05498A		2003	Christie Hammond	Historical Resources Evaluation Report for the Relinquishment of State Route 66 (Foothill Boulevard) Between East Avenue/ Ilex Street and Maple Avenue city of Fontana San Bernardino, CA	Caltrans District 8	
SB-05766	NADB-R - 1065766	1997	Love, Bruce	Cultural Resources Report: Bakersfield—Rialto Fiberoptic Line Project, Kern, Los Angeles and San Bernardino Counties, California.	CRM TECH	
SB-06128		2008	Wlodarshi, Robert J.	Bechtel Wireless Telecommunications Site LA8064 (Solomon Colors II), 1251 West Durst Drive, Rialto, California	Cellular Archaeological Resource Evaluations	
SB-06495		2009	Wlodarshi, Robert J.	Bechtel/ AT&T Wireless Telecommunications Site LA8064 (Solomon Colors II)		
SB-06913	NADB-R - 1066913	2011	Bonner, Wayne H. and Sarah A. Williams	Cultural Resource Records Search and Site Visit Results for T-Mobile USA Candidate IE 24319A (Etiwanda), 1424 West Foothill Boulevard, Rialto, San Bernardino County, California.		
SB-06916		2010	Hudson, Jonathan	Rialto CA 3, 150 South Larch Avenue, Rialto, CA		

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-07048		2012	Padon, Beth	Cultural Resource Assessment Study for Verizon "Hemlock" Site in Rancho Cucamonga, San Bernardino County, California	Discovery Works	36-016454
SB-07084	NADB-R - 1067084	2010	Tang, Bai “Tom”	Preliminary Historical/Archaeological Resources Study, San Bernardino Line Positive Train Control Project, Southern California Regional Rail Authority, Counties of Los Angeles and San Bernardino.	CRM TECH	
SB-07960		2010	Self, William	Class III Cultural Resources Survey Addendum for the Proposed Calnev Expansion Project, California Portion San Bernadino County, California	William Self Associates, Inc.	36-000827, 36-000828, 36-003731, 36-005351, 36-006109, 36-006117, 36-006506, 36-006693, 36-006699, 36-006708, 36-007091, 36-007309, 36-007371, 36-008127, 36-008131, 36-008133, 36-008544, 36-008857, 36-010148, 36-010317, 36-012335, 36-013632, 36-015497, 36-020321, 36-020324, 36-020325, 36-020326, 36-020327, 36-020328, 36-020329, 36-020330, 36-022659, 36-022660, 36-022661, 36-022662, 36-022663, 36-022664

Durst Drive Warehouse

ENERGY ANALYSIS

CITY OF RIALTO

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JANUARY 26, 2022

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LIST OF ABBREVIATED TERMS

%	Percent
(1)	Reference
AGSP	Airport Gateway Specific Plan
AQIA	*Durst Drive Warehouse Air Quality Impact Analysis*
BACM	Best Available Control Measures
BTU	British Thermal Units
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
City	City of Rialto
CPEP	Clean Power and Electrification Pathway
CPUC	California Public Utilities Commission
DMV	Department of Motor Vehicles
EIA	Energy Information Administration
EPA	Environmental Protection Agency
EMFAC	EMissions FACtor
FERC	Federal Energy Regulatory Commission
GHG	Greenhouse Gas
GWh	Gigawatt Hour
HHDT	Heavy-Heavy Duty Trucks
hp-hr-gal	Horsepower Hours Per Gallon
IEPR	Integrated Energy Policy Report
ISO	Independent Service Operator
ISTEA	Intermodal Surface Transportation Efficiency Act
ITE	Institute of Transportation Engineers
kBTU	Thousand-British Thermal Units
kWh	Kilowatt Hour
LDA	Light Duty Auto
LDT1/LDT2	Light-Duty Trucks
LHDT1/LHDT2	Light-Heavy Duty Trucks
MARB/IPA	March Air Reserve Base/Inland Port Airport
MDV	Medium Duty Trucks
MHDT	Medium-Heavy Duty Trucks

MMcfd	Million Cubic Feet Per Day
mpg	Miles Per Gallon
MPO	Metropolitan Planning Organization
PG&E	Pacific Gas and Electric
Project	Durst Drive Warehouse
PV	Photovoltaic
SCAB	South Coast Air Basin
SCE	Southern California Edison
SDAB	San Diego Air Basin
sf	Square Feet
SoCalGas	Southern California Gas
TEA-21	Transportation Equity Act for the 21st Century
U.S.	United States
VMT	Vehicle Miles Traveled

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Durst Drive Warehouse Energy Analysis* is summarized below based on the significance criteria in Section 5 of this report consistent with Appendix G of the 2020 California Environmental Quality Act (CEQA) Statute and Guidelines (*CEQA Guidelines*) (1). Table ES-1 shows the findings of significance for potential energy impacts under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Energy Impact #1: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	5.0	*Less Than Significant*	*n/a*
Energy Impact #2: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	5.0	*Less Than Significant*	*n/a*

ES.2 PROJECT REQUIREMENTS

The Project would be required to comply with regulations imposed by the federal and state agencies that regulate energy use and consumption through various means and programs. Those that are directly and indirectly applicable to the Project and that would assist in the reduction of energy usage include:

- Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)
- The Transportation Equity Act for the 21st Century (TEA-21
- Integrated Energy Policy Report (IEPR)
- State of California Energy Plan
- California Code Title 24, Part 6, Energy Efficiency Standards
- California Code Title 24, Part 11, California Green Building Standards Code (CALGreen)
- AB 1493 Pavley Regulations and Fuel Efficiency Standards
- California's Renewable Portfolio Standard (RPS)
- Clean Energy and Pollution Reduction Act of 2015 (SB 350)

Consistency with the above regulations is discussed in detail in section 5 of this report.

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1 INTRODUCTION

This report presents the results of the energy analysis prepared by Urban Crossroads, Inc., for the proposed Durst Drive Warehouse Project (Project). The purpose of this report is to ensure that energy implication is considered by the City of Rialto (Lead Agency), as the lead agency, and to quantify anticipated energy usage associated with construction and operation of the proposed Project, determine if the usage amounts are efficient, typical, or wasteful for the land use type, and to emphasize avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

1.1 SITE LOCATION

The proposed Durst Drive Warehouse site is loc located at 1230 West Durst Drive in the City of Rialto, as shown on Exhibit 1-A.

The Project is surrounded by industrial uses. According to the City of Rialto Land Use Map. As per the Land Use Map, the Project site is designated for Light Industrial uses. The Light Industrial land use designation allows for light industrial activity such as processing, packaging, machinery repair, fabrication, distribution, warehousing and storage, research and development, and similar uses which are low impact (2).

1.2 PROJECT DESCRIPTION

The Project is proposed to consist of a single 201,239 square foot (sf) warehouse building which includes APNs 1280-622-5, -6, and -7. However, this analysis was performed on an earlier version of the site plan that included a larger building floor area than what is currently proposed, and therefore, the analysis overstates the Project's impacts[1]. It is anticipated that the Project would be developed in a single phase with an anticipated Opening Year of 2023. The proposed Project land use is consistent with the City's Light Industrial land use designation.

This analysis is intended to describe energy usage associated with the expected operational activities at the Project site. This report assumes the Project will operate 24-hours daily for seven days per week.

[1] For purposes of this analysis, a building floor area of 203,350 square feet was evaluated.

EXHIBIT 1-A: LOCATION MAP

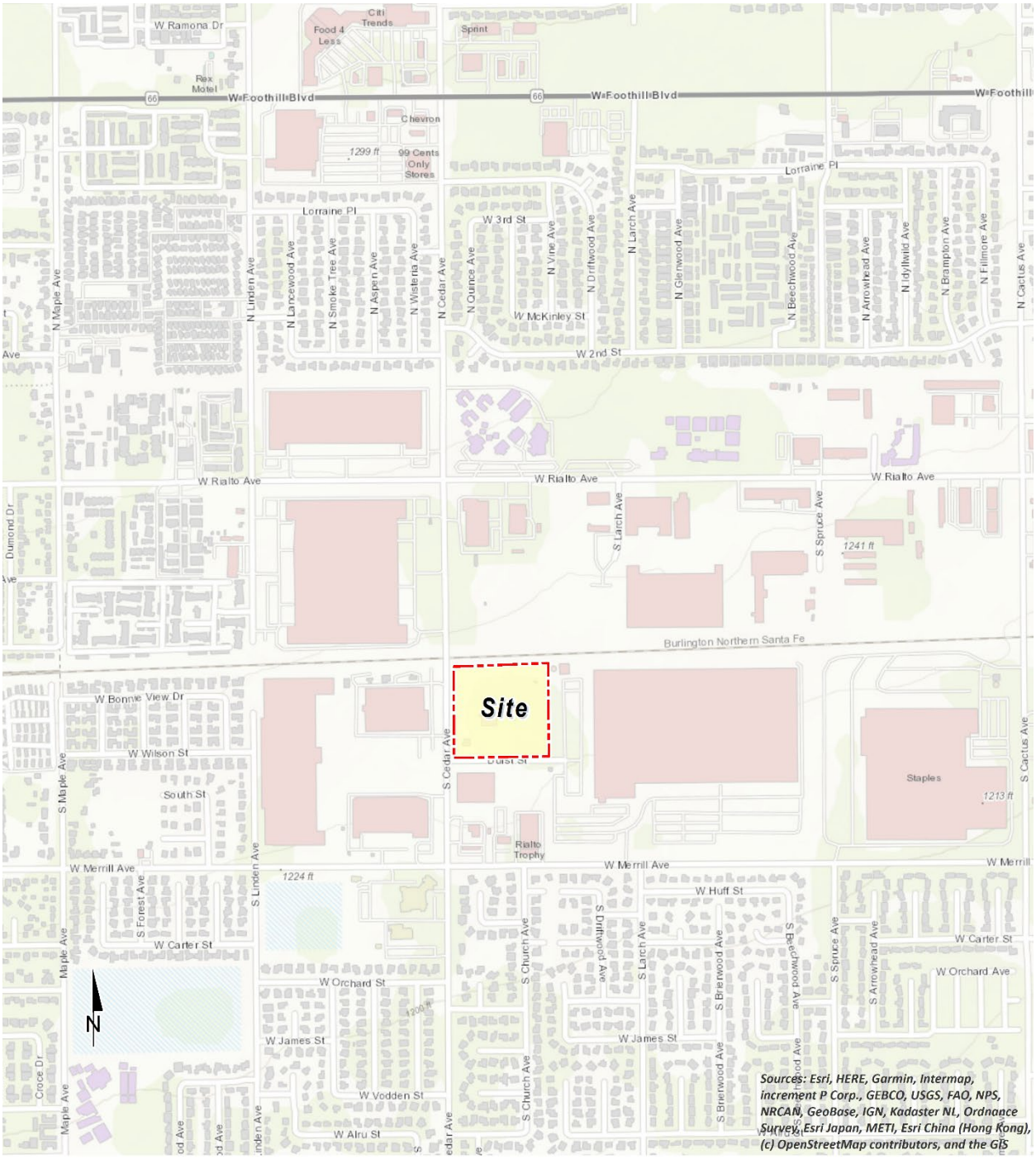
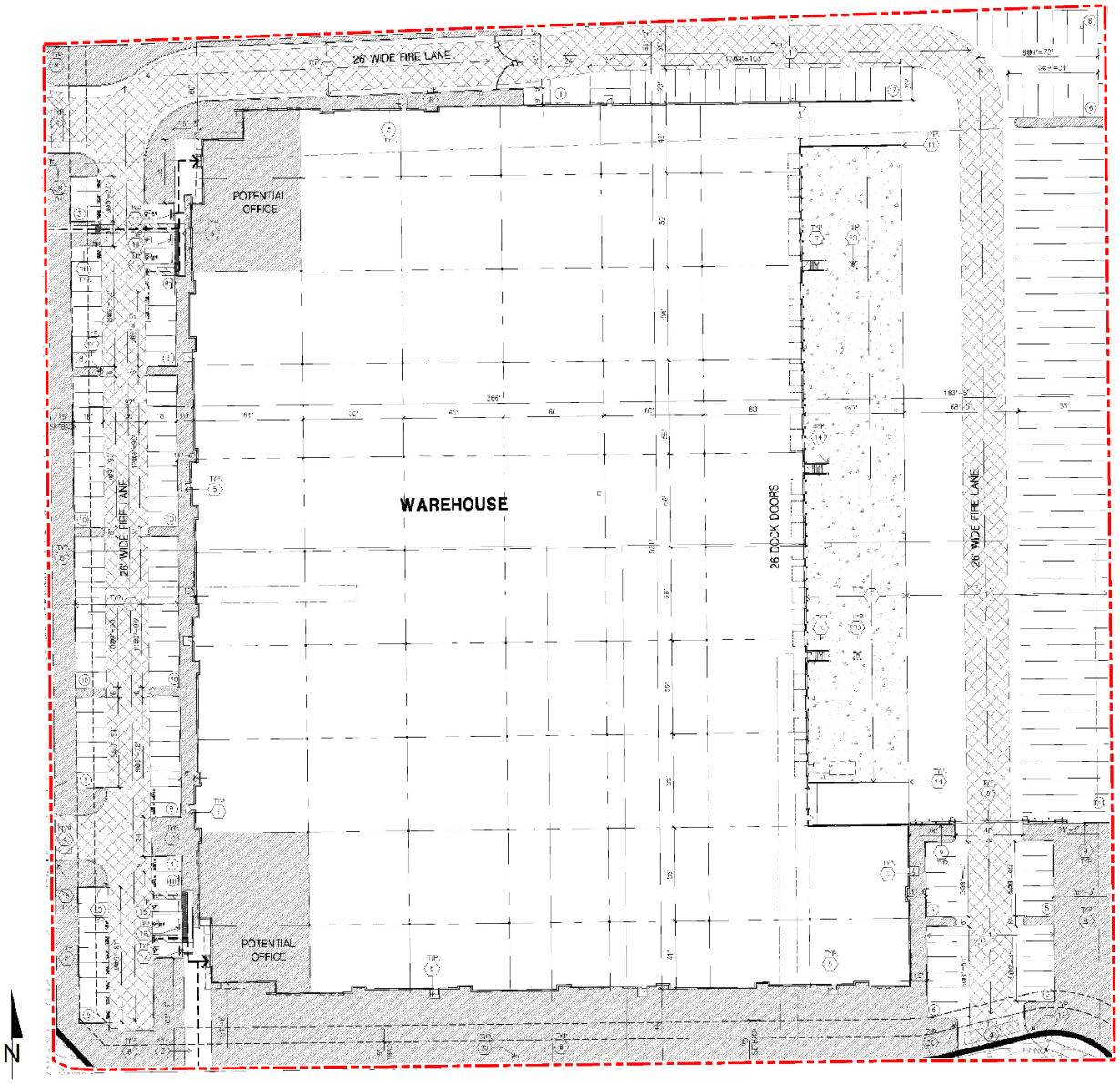


EXHIBIT 1-B: SITE PLAN



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2 EXISTING CONDITIONS

This section provides an overview of the existing energy conditions in the Project region.

2.1 OVERVIEW

The most recent data for California's estimated total energy consumption and natural gas consumption is from 2019, released by the United States (U.S.) Energy Information Administration's (EIA) California State Profile and Energy Estimates in 2021 and included (3):

- As of 2019, approximately 7,802 trillion British Thermal Unit (BTU) of energy was consumed
- As of 2019, approximately 662 million barrels of petroleum
- As of 2019, approximately 2,144 billion cubic feet of natural gas
- As of 2019, approximately 1 million short tons of coal

The California Energy Commission's (CEC) Transportation Energy Demand Forecast 2018-2030 was released in order to support the 2017 Integrated Energy Policy Report. The Transportation energy Demand Forecast 2018-2030 lays out graphs and data supporting their projections of California's future transportation energy demand. The projected inputs consider expected variable changes in fuel prices, income, population, and other variables. Predictions regarding fuel demand included:

- Gasoline demand in the transportation sector is expected to decline from approximately 15.8 billion gallons in 2017 to between 12.3 billion and 12.7 billion gallons in 2030 (4)
- Diesel demand in the transportation sector is expected to rise, increasing from approximately 3.7 billion diesel gallons in 2015 to approximately 4.7 billion in 2030 (4)
- Data from the Department of Energy states that approximately 3.9 billion gallons of diesel fuel were consumed in 2019 (5)

The most recent data provided by the EIA for energy use in California by demand sector is from 2018 and is reported as follows:

- Approximately 39.3% transportation
- Approximately 23.2% industrial
- Approximately 18.7% residential
- Approximately 18.9% commercial (6)

In 2020, total system electric generation for California was 272,576 gigawatt hours (GWh). California's massive electricity in-state generation system generated approximately 190,913 GWh which accounted for approximately 70% of the electricity it uses; the rest was imported from the Pacific Northwest (15%) and the U.S. Southwest (15%) (7). Natural gas is the main source for electricity generation at 42.97% of the total in-state electric generation system power as shown in Table 2-1.

TABLE 2-1: TOTAL ELECRICITY SYSTEM POWER (CALIFORNIA 2020)

Fuel Type	California In-State Generation (GWh)	Percent of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	Percent of Imports	Total California Energy Mix	Total California Power Mix
Coal	317	0.17%	194	6,963	7,157	8.76%	7,474	2.74%
Natural Gas	92,298	48.35%	70	8,654	8,724	10.68%	101,022	37.06%
Oil	30	0.02%	-	-	0	0.00%	30	0.01%
Other (Waste Heat/Petroleum Coke)	384	0.20%	125	9	134	0.16%	518	0.19%
Nuclear	16,280	8.53%	672	8,481	9,154	11.21%	25,434	9.33%
Large Hydro	17,938	9.40%	14,078	1,259	15,337	18.78%	33,275	12.21%
Unspecified	-	0.00%	12,870	1,745	14,615	17.90%	14,615	5.36%
Non-Renewable and Unspecified Totals	127,248	66.65%	28,009	27,111	55,120	67.50%	182,368	66.91%
Biomass	5,680	2.97%	975	25	1,000	1.22%	6,679	2.45%
Geothermal	11,345	5.94%	166	1,825	1,991	2.44%	13,336	4.89%
Small Hydro	3,476	1.82%	320	2	322	0.39%	3,798	1.39%
Solar	29,456	15.43%	284	6,312	6,596	8.08%	36,052	13.23%
Wind	13,708	7.18%	11,438	5,197	16,635	20.37%	30,343	11.13%
Renewable Totals	63,665	33.35%	13,184	13,359	26,543	32.50%	90,208	33.09%
System Totals	***190,913***	***100.00%***	***41,193***	***40,471***	***81,663***	***100.00%***	***272,576***	***100.00%***

Source: California Energy Commission's 2020 Total System Electric Generation

An updated summary of, and context for energy consumption and energy demands within the State is presented in "U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts" excerpted below (8):

- California was the seventh-largest producer of crude oil among the 50 states in 2019, and, as of January 2020, it ranked third in oil refining capacity. Foreign suppliers, led by Saudi Arabia, Iraq, Ecuador, and Colombia, provided more than half of the crude oil refined in California in 2019.
- California is the largest consumer of both jet fuel and motor gasoline among the 50 states and accounted for 17% of the nation's jet fuel consumption and 11% of motor gasoline consumption in 2019. The state is the second-largest consumer of all petroleum products combined, accounting for 10% of the U.S. total. In 2018, California's energy consumption was the second highest among the states, but its per capita energy consumption was the fourth-lowest due in part to its mild climate and its energy efficiency programs.
- In 2019, California was the nation's top producer of electricity from solar, geothermal, and biomass energy and the state was second in the nation in conventional hydroelectric power generation.
- In 2019, California was the fourth largest electricity producer in the nation, but the state was also the nation's largest importer of electricity and received about 28% of its electricity supply from generating facilities outside of California, including imports from Mexico.

As indicated above, California is one of the nation's leading energy-producing states, and California's per capita energy use is among the nation's most efficient. Given the nature of the Project, the remainder of this discussion will focus on the three sources of energy that are most relevant to the project—namely, electricity, natural gas, and transportation fuel for vehicle trips associated with the uses planned for the Project.

2.2 ELECTRICITY

The usage associated with electricity use were calculated using the California Emissions Estimator Model (CalEEMod) Version 2020.4.0. The Southern California region's electricity reliability has been of concern for the past several years due to the planned retirement of aging facilities that depend upon once-through cooling technologies, as well as the June 2013 retirement of the San Onofre Nuclear Generating Station (San Onofre). While the once-through cooling phase-out has been ongoing since the May 2010 adoption of the State Water Resources Control Board's once-through cooling policy, the retirement of San Onofre complicated the situation. California ISO studies revealed the extent to which the South California Air Basin (SCAB) and the San Diego Air Basin (SDAB) region were vulnerable to low-voltage and post-transient voltage instability concerns. A preliminary plan to address these issues was detailed in the 2013 Integrative Energy Policy Report (IEPR) after a collaborative process with other energy agencies, utilities, and air districts (9). Similarly, the subsequent 2018 and 2019 IEPR's identify broad strategies that are aimed at maintaining electricity system reliability.

Electricity is currently provided to the Project by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons in 15 counties and in 180 incorporated cities, within a service area encompassing approximately 50,000 square miles. Based on SCE's 2018 Power Content Label Mix, SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers (10).

California's electricity industry is an organization of traditional utilities, private generating companies, and state agencies, each with a variety of roles and responsibilities to ensure that electrical power is provided to consumers. The California Independent Service Operator (ISO) is a nonprofit public benefit corporation and is the impartial operator of the State's wholesale power grid and is charged with maintaining grid reliability, and to direct uninterrupted electrical energy supplies to California's homes and communities. While utilities still own transmission assets, the ISO routes electrical power along these assets, maximizing the use of the transmission system and its power generation resources. The ISO matches buyers and sellers of electricity to ensure that enough power is available to meet demand. To these ends, every five minutes the ISO forecasts electrical demands, accounts for operating reserves, and assigns the lowest cost power plant unit to meet demands while ensuring adequate system transmission capacities and capabilities (11).

Part of the ISO's charge is to plan and coordinate grid enhancements to ensure that electrical power is provided to California consumers. To this end, utilities file annual transmission expansion/modification plans to accommodate the State's growing electrical needs. The ISO reviews and either approves or denies the proposed additions. In addition, and perhaps most importantly, the ISO works with other areas in the western United States electrical grid to ensure that adequate power supplies are available to the State. In this manner, continuing reliable and affordable electrical power is assured to existing and new consumers throughout the State.

Tables 2-2 identifies SCE's specific proportional shares of electricity sources in 2019. As indicated in Table 2-2, the 2019 SCE Power Mix has renewable energy at 35.1% of the overall energy resources. Geothermal resources are at 5.9%, wind power is at 11.5%, large hydroelectric sources are at 7.9%, solar energy is at 16.0%, and coal is at 0% (12).

TABLE 2-2: SCE 2019 POWER CONTENT MIX

Energy Resources	2019 SCE Power Mix
Eligible Renewable	**35.1%**
Biomass & Waste	0.6%
Geothermal	5.9%
Eligible Hydroelectric	1.0%
Solar	16.0%
Wind	11.5%
Coal	**0.0%**
Large Hydroelectric	**7.9%**
Natural Gas	**16.1%**
Nuclear	**8.2%**
Other	**0.1%**
Unspecified Sources of power*	32.6%
Total	**100%**

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources

2.3 NATURAL GAS

The following summary of natural gas customers and volumes, supplies, delivery of supplies, storage, service options, and operations is excerpted from information provided by the California Public Utilities Commission (CPUC).

> *"The CPUC regulates natural gas utility service for approximately 10.8 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller natural gas utilities. The CPUC also regulates independent storage operators: Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.*
>
> *California's natural gas utilities provide service to over 11 million gas meters. SoCalGas and PG&E provide service to about 5.9 million and 4.3 million customers, respectively, while SDG&E provides service to over 800, 000 customers. In 2018, California gas utilities forecasted that they would deliver about 4740 million cubic feet per day (MMcfd) of gas to their customers, on average, under normal weather conditions.*
>
> *The overwhelming majority of natural gas utility customers in California are residential and small commercials customers, referred to as "core" customers. Larger volume gas customers, like electric generators and industrial customers, are called "noncore" customers. Although very small in number relative to core customers, noncore customers consume about 65% of the natural gas delivered by the state's natural gas utilities, while core customers consume about 35%.*

A significant amount of gas (about 19%, or 1131 MMcfd, of the total forecasted California consumption in 2018) is also directly delivered to some California large volume consumers, without being transported over the regulated utility pipeline system. Those customers, referred to as "bypass" customers, take service directly from interstate pipelines or directly from California producers.

SDG&E and Southwest Gas' southern division are wholesale customers of SoCalGas, i.e., they receive deliveries of gas from SoCalGas and in turn deliver that gas to their own customers. (Southwest Gas also provides natural gas distribution service in the Lake Tahoe area.) Similarly, West Coast Gas, a small gas utility, is a wholesale customer of PG&E. Some other wholesale customers are municipalities like the cities of Palo Alto, Long Beach, and Vernon, which are not regulated by the CPUC.

Natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California gas utilities are Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Mojave Pipeline, and Tuscarora. Another pipeline, the North Baja - Baja Norte Pipeline takes gas off the El Paso Pipeline at the California/Arizona border and delivers that gas through California into Mexico. While the Federal Energy Regulatory Commission (FERC) regulates the transportation of natural gas on the interstate pipelines, and authorizes rates for that service, the California Public Utilities Commission may participate in FERC regulatory proceedings to represent the interests of California natural gas consumers.

The gas transported to California gas utilities via the interstate pipelines, as well as some of the California-produced gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipelines systems (commonly referred to as California's "backbone" pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered to the local transmission and distribution pipeline systems, or to natural gas storage fields. Some large volume noncore customers take natural gas delivery directly off the high-pressure backbone and local transmission pipeline systems, while core customers and other noncore customers take delivery off the utilities' distribution pipeline systems. The state's natural gas utilities operate over 100,000 miles of transmission and distribution pipelines, and thousands more miles of service lines.

Bypass customers take most of their deliveries directly off the Kern/Mojave pipeline system, but they also take a significant amount of gas from California production.

PG&E and SoCalGas own and operate several natural gas storage fields that are located within their service territories in northern and southern California, respectively. These storage fields, and four independently owned storage utilities - Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage - help meet peak seasonal and daily natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently. PG&E is a 25% owner of the Gill Ranch Storage field. These storage fields provide a significant amount of infrastructure capacity to help meet

California's natural gas requirements, and without these storage fields, California would need much more pipeline capacity in order to meet peak gas requirements .

Prior to the late 1980s, California regulated utilities provided virtually all natural gas services to all their customers. Since then, the Commission has gradually restructured the California gas industry in order to give customers more options while assuring regulatory protections for those customers that wish to, or are required to, continue receiving utility-provided services.

The option to purchase natural gas from independent suppliers is one of the results of this restructuring process. Although the regulated utilities procure natural gas supplies for most core customers, core customers have the option to purchase natural gas from independent natural gas marketers, called "core transport agents" (CTA). Contact information for core transport agents can be found on the utilities' web sites. Noncore customers, on the other hand, make natural gas supply arrangements directly with producers or with marketers.

Another option resulting from the restructuring process occurred in 1993, when the Commission removed the utilities' storage service responsibility for noncore customers, along with the cost of this service from noncore customers' transportation rates. The Commission also encouraged the development of independent storage fields, and in subsequent years, all the independent storage fields in California were established. Noncore customers and marketers may now take storage service from the utility or from an independent storage provider (if available), and pay for that service, or may opt to take no storage service at all. For core customers, the Commission assures that the utility has adequate storage capacity set aside to meet core requirements, and core customers pay for that service.

In a 1997 decision, the Commission adopted PG&E's "Gas Accord", which unbundled PG&E's backbone transmission costs from noncore transportation rates. This decision gave customers and marketers the opportunity to obtain pipeline capacity rights on PG&E's backbone transmission pipeline system, if desired, and pay for that service at rates authorized by the Commission. The Gas Accord also required PG&E to set aside a certain amount of backbone transmission capacity in order to deliver gas to its core customers. Subsequent Commission decisions modified and extended the initial terms of the Gas Accord. The "Gas Accord" framework is still in place today for PG&E's backbone and storage rates and services and is now simply referred to as PG&E Gas Transmission and Storage (GT&S).

In a 2006 decision, the Commission adopted a similar gas transmission framework for Southern California, called the "firm access rights" system. SoCalGas and SDG&E implemented the firm access rights (FAR) system in 2008, and it is now referred to as the backbone transmission system (BTS) framework. As under the PG&E backbone transmission system, SoCalGas backbone transmission costs are unbundled from noncore transportation rates. Noncore customers and marketers may obtain, and pay for, firm backbone transmission capacity at various receipt points on the SoCalGas system. A

certain amount of backbone transmission capacity is obtained for core customers to assure meeting their requirements.

Many if not most noncore customers now use a marketer to provide for several of the services formerly provided by the utility. That is, a noncore customer may simply arrange for a marketer to procure its supplies, and obtain any needed storage and backbone transmission capacity, in order to assure that it will receive its needed deliveries of natural gas supplies. Core customers still mainly rely on the utilities for procurement service, but they have the option to take procurement service from a CTA. Backbone transmission and storage capacity is either set aside or obtained for core customers in amounts to assure very high levels of service.

In order properly operate their natural gas transmission pipeline and storage systems, PG&E and SoCalGas must balance the amount of gas received into the pipeline system and delivered to customers or to storage fields. Some of these utilities' storage capacity is dedicated to this service, and under most circumstances, customers do not need to precisely match their deliveries with their consumption. However, when too much or too little gas is expected to be delivered into the utilities' systems, relative to the amount being consumed, the utilities require customers to more precisely match up their deliveries with their consumption. And, if customers do not meet certain delivery requirements, they could face financial penalties. The utilities do not profit from these financial penalties - the amounts are then returned to customers as a whole. If the utilities find that they are unable to deliver all the gas that is expected to be consumed, they may even call for a curtailment of some gas deliveries. These curtailments are typically required for just the largest, noncore customers. It has been many years since there has been a significant curtailment of core customers in California." (13)

As indicated in the preceding discussions, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available via existing delivery systems, thereby increasing the availability and reliability of resources in total. The CPUC oversees utility purchases and transmission of natural gas to ensure reliable and affordable natural gas deliveries to existing and new consumers throughout the State.

2.4 TRANSPORTATION ENERGY RESOURCES

The Project would generate additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. The Department of Motor Vehicles (DMV) identified 35.8 million registered vehicles in California (14), and those vehicles consume an estimated 17.4 billion gallons of fuel each year[2]. Gasoline (and other vehicle fuels) are commercially provided commodities and would be available to the Project patrons and employees via commercial outlets.

[2] Fuel consumptions estimated utilizing information from EMFAC2017.

California's on-road transportation system includes 394,383 land miles, more than 26.4 million passenger vehicles and light trucks, and almost 8.8 million medium- and heavy-duty vehicles (14). While gasoline consumption has been declining since 2008 it is still by far the dominant fuel. California is the second-largest consumer of petroleum products, after Texas, and accounts for 10% of the nation's total consumption. The state is the largest U.S. consumer of motor gasoline and jet fuel, and 85% of the petroleum consumed in California is used in the transportation sector (15).

California accounts for less than 1% of total U.S. natural gas reserves and production. As with crude oil, California's natural gas production has experienced a gradual decline since 1985. In 2019, about 37% of the natural gas delivered to consumers went to the state's industrial sector, and about 28% was delivered to the electric power sector. Natural gas fueled more than two-fifths of the state's utility-scale electricity generation in 2019. The residential sector, where two-thirds of California households use natural gas for home heating, accounted for 22% of natural gas deliveries. The commercial sector received 12% of the deliveries to end users and the transportation sector consumed the remaining 1% (15).

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3 REGULATORY BACKGROUND

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency (EPA) are three federal agencies with substantial influence over energy policies and programs. On the state level, the CPUC and the CEC are two agencies with authority over different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below.

3.1 FEDERAL REGULATIONS

3.1.1 INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991 (ISTEA)

The ISTEA promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions.

3.1.2 THE TRANSPORTATION EQUITY ACT FOR THE 21ST CENTURY (TEA-21)

The TEA-21 was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

3.2 CALIFORNIA REGULATIONS

3.2.1 INTEGRATED ENERGY POLICY REPORT (IEPR)

Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (Public Resources Code § 25301[a]). The CEC prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2020 IEPR was adopted March 23, 2020, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2020 IEPR identifies actions the

state and others can take to ensure a clean, affordable, and reliable energy system. California's innovative energy policies strengthen energy resiliency, reduce greenhouse gas (GHG) emissions that cause climate change, improve air quality, and contribute to a more equitable future (16).

3.2.2 STATE OF CALIFORNIA ENERGY PLAN

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

3.2.3 CALIFORNIA CODE TITLE 24, PART 6, ENERGY EFFICIENCY STANDARDS

California Code of Regulations (CCR) Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas (GHG) emissions. The 2019 version of Title 24 was adopted by the CEC and became effective on January 1, 2020. The 2019 Title are applicable to building permit applications submitted on or after January 1, 2020. The 2019 Title 24 standards require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, and update indoor and outdoor lighting standards for nonresidential buildings. The CEC anticipates that nonresidential buildings will use approximately 30% less energy due to lighting upgrades compared to the prior code (17).

3.2.4 AB 1493 PAVLEY REGULATIONS AND FUEL EFFICIENCY STANDARDS

California AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Under this legislation, CARB adopted regulations to reduce GHG emissions from non-commercial passenger vehicles (cars and light-duty trucks). Although aimed at reducing GHG emissions, specifically, a co-benefit of the Pavley standards is an improvement in fuel efficiency and consequently a reduction in fuel consumption.

3.2.5 CALIFORNIA'S RENEWABLE PORTFOLIO STANDARD (RPS)

First established in 2002 under Senate Bill (SB) 1078, California's Renewable Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable resources to 33% of total retail sales by 2020 (18).

3.2.6 CLEAN ENERGY AND POLLUTION REDUCTION ACT OF 2015 (SB 350)

In October 2015, the legislature approved, and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the renewables portfolio standard (RPS), higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 25% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States (California Leginfo 2015).

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4 PROJECT ENERGY DEMANDS AND ENERGY EFFICIENCY MEASURES

4.1 EVALUATION CRITERIA

Per Appendix F of the *State CEQA Guidelines* (19), states that the means of achieving the goal of energy conservation includes the following:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas, and oil; and
- Increasing reliance on renewable energy sources.

In compliance with Appendix G of the *State CEQA Guidelines* (20), this report analyzes the project's anticipated energy use during construction and operations to determine if the Project would:

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

4.2 METHODOLOGY

Information from the CalEEMod Version 2020.4.0 outputs for the *Durst Drive Warehouse Air Quality Impact Analysis* (AQIA) (21) was utilized in this analysis, detailing Project related construction equipment, transportation energy demands, and facility energy demands.

4.2.1 CALEEMOD

In May 2021, the SCAQMD, in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the CalEEMod Version 2020.4.0. The purpose of this model is to calculate construction-source and operational-source criteria pollutants and GHG emissions from direct and indirect sources as well as energy usage. (22). Accordingly, the latest version of CalEEMod has been used to determine the proposed Project's anticipated transportation and facility energy demands. Outputs from the annual model runs are provided in Appendices 4.1 through 4.2.

4.2.2 EMISSION FACTORS MODEL

On August 19, 2019, the EPA approved the 2017 version of the EMissions FACtor model (EMFAC) web database for use in State Implementation Plan and transportation conformity analyses. EMFAC2017 is a mathematical model that was developed to calculate emission rates, fuel consumption, VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (23). This energy study utilizes the different fuel types for each vehicle class from the annual EMFAC2017 emission inventory in order to derive the average vehicle fuel economy which is then used to determine the estimated annual fuel consumption associated with vehicle usage during Project construction and operational activities. For purposes of

analysis, the 2022 through 2023 analysis years were utilized to determine the average vehicle fuel economy used throughout the duration of the Project. Output from the EMFAC2017 model run is provided in Appendix 4.3.

4.3 CONSTRUCTION ENERGY DEMANDS

The focus within this section is the energy implications of the construction process, specifically the power cost from on-site electricity consumption during construction of the proposed Project.

4.3.1 CONSTRUCTION POWER COST

The total Project construction power costs is the summation of the products of the area (sf) by the construction duration and the typical power cost.

CONSTRUCTION DURATION

Construction is anticipated to begin in July 2022 and will last through June 2023 (21). The construction schedule utilized in the analysis, shown in Table 4-1, represents a "worst-case" analysis scenario. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (24).

TABLE 4-1: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Demolition	07/01/2022	07/28/2022	20
Site Preparation	07/29/2022	08/11/2022	10
Grading	08/12/2022	09/08/2022	20
Building Construction	09/09/2022	06/15/2023	200
Paving	05/19/2023	06/15/2023	20
Architectural Coating	05/19/2023	06/15/2023	20

PROJECT CONSTRUCTION POWER COST

The *2021 National Construction Estimator* identifies a typical power cost per 1,000 sf of construction per month of $2.37, which was used to calculate the Project's total construction power cost (25).

As shown on Table 4-2, the total power cost of the on-site electricity usage during the construction of the Project is estimated to be approximately $10,337.80.

TABLE 4-2: CONSTRUCTION POWER COST

Land Use	Power Cost (per 1,000 SF)	Size (1,000 SF)	Construction Duration (months)	Project Construction Power Cost
High-Cube Transload	$2.37	203.351	11	$5,301.36
Parking Lot	$2.37	48.110	11	$1,254.23
Other Asphalt Surfaces	$2.37	145.079	11	$3,782.21
CONSTRUCTION POWER COST				***$10,337.80***

4.3.2 CONSTRUCTION ELECTRICITY USAGE

The total Project construction electricity usage is the summation of the products of the power cost (estimated in Table 4-2) by the utility provider cost per kilowatt hour (kWh) of electricity.

PROJECT CONSTRUCTION ELECTRICITY USAGE

The SCE's general service rate schedule were used to determine the Project's electrical usage. As of October 1, 2021, SCE's general service rate is $0.13 per kilowatt hours (kWh) of electricity for industrial services (26). As shown on Table 4-3, the total electricity usage from on-site Project construction related activities is estimated to be approximately 82,445 kWh.

TABLE 4-3: CONSTRUCTION ELECTRICITY USAGE

Land Use	Cost per kWh	Project Construction Electricity Usage (kWh)
High-Cube Transload	$0.13	42,279
Parking Lot	$0.13	10,003
Other Asphalt Surfaces	$0.13	30,164
CONSTRUCTION ELECTRICITY USAGE		***82,445***

4.3.3 CONSTRUCTION EQUIPMENT FUEL ESTIMATES

Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction.

CONSTRUCTION EQUIPMENT

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 4-4 will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code. It should be noted that most pieces of equipment would likely operate for fewer hours per day. A summary of construction equipment assumptions by phase is provided at Table 4-4.

TABLE 4-4: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment	Amount	Hours Per Day
Demolition	Excavators	2	8
	Skid Steer Loaders	1	8
Site Preparation	Crawler Tractors	4	8
	Rubber Tired Dozers	3	8
Grading	Crawler Tractors	3	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
Building Construction	Cranes	1	8
	Crawler Tractors	3	8
	Forklifts	3	8
	Generator Sets	1	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

PROJECT CONSTRUCTION EQUIPMENT FUEL CONSUMPTION

Project construction activity timeline estimates, construction equipment schedules, equipment power ratings, load factors, and associated fuel consumption estimates are presented in Table 4-5. The aggregate fuel consumption rate for all equipment is estimated at 18.5 horsepower hour per gallon (hp-hr-gal.), obtained from CARB 2018 Emissions Factors Tables and cited fuel consumption rate factors presented in Table D-24 of the Moyer guidelines (27). For the purposes of this analysis, the calculations are based on all construction equipment being diesel-powered which is consistent with industry standards. Diesel fuel would be supplied by existing commercial fuel providers serving the Project area and region[3]. As presented in Table 4-5, Project construction activities would consume an estimated 117,251 gallons of diesel fuel. Project construction would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

[3] Based on Appendix A of the CalEEMod User's Guide, Construction consists of several types of off-road equipment. Since the majority of the off-road construction equipment used for construction projects are diesel fueled, CalEEMod assumes all of the equipment operates on diesel fuel.

TABLE 4-5: CONSTRUCTION EQUIPMENT FUEL CONSUMPTION ESTIMATES

Construction Activity	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption
Demolition	20	Excavators	158	2	8	0.38	961	1,039
		Skid Steer Loaders	65	1	8	0.37	192	208
Site Preparation	10	Crawler Tractors	212	4	8	0.43	2,917	1,577
		Rubber Tired Dozers	247	3	8	0.40	2,371	1,282
Grading	200	Crawler Tractors	212	3	8	0.43	2,188	23,652
		Graders	187	1	8	0.41	613	6,631
		Rubber Tired Dozers	247	1	8	0.40	790	8,545
		Scrapers	367	2	8	0.48	2,819	30,471
Building Construction	200	Cranes	231	1	8	0.29	536	5,794
		Crawler Tractors	212	3	8	0.43	2,188	23,652
		Forklifts	89	3	8	0.20	427	4,618
		Generator Sets	84	1	8	0.74	497	5,376
		Welders	46	1	8	0.45	166	1,790
Paving	20	Pavers	130	2	8	0.42	874	944
		Paving Equipment	132	2	8	0.36	760	822
		Rollers	80	2	8	0.38	486	526
Architectural Coating	20	Air Compressors	78	1	8	0.48	300	324
CONSTRUCTION FUEL DEMAND (GALLONS DIESEL FUEL)								***117,251***

4.3.3 CONSTRUCTION TRIPS AND VMT

Construction generates on-road vehicle emissions from vehicle usage for workers, hauling, and vendors commuting to and from the site. The number of workers, hauling, and vendor trips are presented below in Table 4-6. It should be noted that for Vendor Trips, specifically, CalEEMod only assigns Vendor Trips to the Building Construction phase. Vendor trips would likely occur during all phases of construction. As such, the CalEEMod defaults for Vendor Trips have been adjusted based on a ratio of the total vendor trips to the number of days of each subphase of activity.

TABLE 4-6: CONSTRUCTION TRIPS AND VMT

Construction Activity	Worker Trips Per Day	Vendor Trips Per Day	Hauling Trips Per Day
Demolition	8	5	12
Site Preparation	18	3	0
Grading	18	5	100
Building Construction	167	52	0
Paving	15	0	0
Architectural Coating	33	0	0

4.3.4 CONSTRUCTION WORKER FUEL ESTIMATES

With respect to estimated VMT for the Project, the construction worker trips would generate an estimated 519,645 VMT during the 11 months of construction (21). Based on CalEEMod methodology, it is assumed that 50% of all vendor trips are from light-duty-auto vehicles (LDA), 25% are from light-duty-trucks (LDT1[4]), and 25% are from light-duty-trucks (LDT2[5]). Data regarding Project related construction worker trips were based on CalEEMod defaults utilized within the AQIA.

Vehicle fuel efficiencies for LDA, LDT1, and LDT2 were estimated using information generated within the 2017 version of the EMFAC developed by CARB. EMFAC2017 is a mathematical model that was developed to calculate emission rates, fuel consumption, and VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (23). EMFAC2017 was run for the LDA, LDT1, and LDT2 vehicle class within the California sub-area for the 2022 through 2023 calendar years. Data from EMFAC2017 is shown in Appendix 4.3.

Table 4-7 provides an estimated annual fuel consumption resulting from Project construction worker trips. Based on Table 4-7, it is estimated that 17,810 gallons of fuel will be consumed related to construction worker trips during full construction of the Project.

[4] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[5] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

TABLE 4-7: CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES

Year	Construction Activity	Duration (Days)	Worker Trips/Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2022	LDA						
	Demolition	20	4	14.7	1,176	31.93	37
	Site Preparation	10	9	14.7	1,323	31.93	41
	Grading	20	9	14.7	2,646	31.93	83
	Building Construction	81	84	14.7	100,019	31.93	3,132
	LDT1						
	Demolition	20	2	14.7	588	26.79	22
	Site Preparation	10	5	14.7	735	26.79	27
	Grading	20	5	14.7	1,470	26.79	55
	Building Construction	81	42	14.7	50,009	26.79	1,867
	LDT2						
	Demolition	20	2	14.7	588	25.15	23
	Site Preparation	10	5	14.7	735	25.15	29
	Grading	20	5	14.7	1,470	25.15	58
	Building Construction	81	42	14.7	50,009	25.15	1,989
2023	LDA						
	Building Construction	119	84	14.7	146,941	32.93	4,462
	Paving	20	8	14.7	2,352	32.93	71
	Architectural Coating	20	17	14.7	4,998	32.93	152
	LDT1						
	Building Construction	119	42	14.7	73,471	27.61	2,661
	Paving	20	4	14.7	1,176	27.61	43
	Architectural Coating	20	9	14.7	2,646	27.61	96
	LDT2						
	Building Construction	119	42	14.7	73,471	26.11	2,814
	Paving	20	4	14.7	1,176	26.11	45
	Architectural Coating	20	9	14.7	2,646	26.11	101
TOTAL CONSTRUCTION WORKER FUEL CONSUMPTION							***17,810***

It should be noted that construction worker trips would represent a "single-event" gasoline fuel demand and would not require on-going or permanent commitment of fuel resources for this purpose.

4.3.5 CONSTRUCTION VENDOR/HAULING FUEL ESTIMATES

With respect to estimated VMT, the construction vendor trips (vehicles that deliver materials to the site during construction) would generate an estimated 118,492 VMT along area roadways for the Project over the duration of construction activity (21). It is assumed that 50% of all vendor trips are from medium-heavy duty trucks (MHDT), 50% of vendor trips are from heavy-heavy duty trucks (HHDT), and), 100% of hauling trips are from HHDTs. These assumptions are consistent with the CalEEMod defaults utilized within the within the AQIA (21). Vehicle fuel efficiencies for MHDTs and HHDTs were estimated using information generated within EMFAC2017. EMFAC2017 was run for the MHDT and HHDT vehicle classes within the California sub-area for the 2022 through 2023 calendar years. Data from EMFAC2017 is shown in Appendix 4.3.

Based on Table 4-8, it is estimated that 16,299 gallons of fuel will be consumed related to construction vendor trips during full construction of the Project.

TABLE 4-8: CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES (1 OF 3)

Year	Construction Activity	Duration (Days)	Vendor/ Hauling Trips/Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2022	MHDT						
	Demolition	20	3	6.9	414	10.04	41
	Site Preparation	10	2	6.9	138	10.04	14
	Grading	20	3	6.9	414	10.04	41
	Building Construction	81	26	6.9	14,531	10.04	1,447
	HHDT (Vendor)						
	Demolition	20	3	6.9	414	6.33	65
	Site Preparation	10	2	6.9	138	6.33	22
	Grading	20	3	6.9	414	6.33	65
	Building Construction	81	26	6.9	14,531	6.33	2,296
	HHDT (Hauling)						
	Demolition	20	12	20	4,800	6.33	758
	Grading	20	100	20	40,000	6.33	6,320
2023	MHDT						
	Building Construction	119	26	6.9	21,349	10.45	2,042
	HHDT (Vendor)						
	Building Construction	119	26	6.9	21,349	6.70	3,187
TOTAL CONSTRUCTION VENDOR/HAULING FUEL CONSUMPTION							***16,299***

It should be noted that Project construction vendor trips would represent a “single-event” diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

4.3.6 CONSTRUCTION ENERGY EFFICIENCY/CONSERVATION MEASURES

Starting in 2014, CARB adopted the nation's first regulation aimed at cleaning up off-road construction equipment such as bulldozers, graders, and backhoes. These requirements ensure fleets gradually turnover the oldest and dirtiest equipment to newer, cleaner models and prevent fleets from adding older, dirtier equipment. As such, the equipment used for Project construction would conform to CARB regulations and California emissions standards. It should also be noted that there are no unusual Project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the Project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel.

Construction contractors would be required to comply with applicable CARB regulation regarding retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants. Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy and the minimization or elimination of wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption.

Additional construction-source energy efficiencies would occur due to required California regulations and best available control measures (BACM). For example, CCR Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Section 2449(d)(3) requires that grading plans shall reference the requirement that a sign shall be posted on-site stating that construction workers need to shut off engines at or before five minutes of idling.” In this manner, construction equipment operators are required to be informed that engines are to be turned off at or prior to five minutes of idling. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

A full analysis related to the energy needed to form construction materials is not included in this analysis due to a lack of detailed Project-specific information on construction materials. At this time, an analysis of the energy needed to create Project-related construction materials would be extremely speculative and thus has not been prepared.

In general, the construction processes promote conservation and efficient use of energy by reducing raw materials demands, with related reduction in energy demands associated with raw materials extraction, transportation, processing, and refinement. Use of materials in bulk reduces energy demands associated with preparation and transport of construction materials as well as

the transport and disposal of construction waste and solid waste in general, with corollary reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations.

4.4 OPERATIONAL ENERGY DEMANDS

Energy consumption in support of or related to Project operations would include transportation energy demands (energy consumed by passenger car and truck vehicles accessing the Project site) and facilities energy demands (energy consumed by building operations and site maintenance activities).

4.4.1 TRANSPORTATION ENERGY DEMANDS

Energy that would be consumed by Project-generated traffic is a function of total VMT and estimated vehicle fuel economies of vehicles accessing the Project site. The VMT per vehicle class can be determined by evaluated in the vehicle fleet mix and the total VMT.

As with worker and vendors trips, operational vehicle fuel efficiencies were estimated using information generated within EMFAC2017 developed by CARB (23). EMFAC2017 was run for the San Bernardino County area for the 2022 and 2023 calendar years. Data from EMFAC2017 is shown in Appendix 4.3.

As summarized on Table 4-9 the Project will result in 1,522,537 annual VMT and an estimated annual fuel consumption of 106,321 gallons of fuel.

TABLE 4-9: TOTAL PROJECT-GENERATED TRAFFIC ANNUAL FUEL CONSUMPTION

Vehicle Type	Annual VMT	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
LDA	532,203	32.93	16,162
LDT1	55,236	27.61	2,001
LDT2	170,589	26.11	6,534
MDV	137,539	21.08	6,524
MCY	25,041	37.21	673
LHDT1	82,645	13.97	5,918
LHDT2	22,031	37.21	592
MHDT	117,798	10.45	11,269
HHDT	379,456	6.70	56,650
TOTAL (ALL VEHICLES)	***1,522,537***		***106,321***

4.4.2 FACILITY ENERGY DEMANDS

Project building operations activities would result in the consumption of natural gas and electricity. Natural gas would be supplied to the Project by SoCalGas; electricity would be supplied to the Project by SCE. As previously stated, the analysis herein assumes compliance with

the 2019 Title 24 and CALGreen standards. Annual natural gas and electricity demands of the Project are summarized in Table 4-10 and provided in Appendix 4.2.

TABLE 4-10: PROJECT ANNUAL OPERATIONAL NATURAL GAS AND ELECTRICITY DEMAND SUMMARY

Land Use	Natural Gas Demand (kBTU/year)	Electricity Demand (kWh/year)
High-Cube Transload	408,736	471,774
Parking Lot	0	16,839
Other Asphalt Surfaces	0	0
TOTAL PROJECT ENERGY DEMAND	***408,736***	***488,613***

kBTU – kilo-British Thermal Units

4.4.3 OPERATIONAL ENERGY EFFICIENCY/CONSERVATION MEASURES

Energy efficiency/energy conservation attributes of the Project would be complemented by increasingly stringent state and federal regulatory actions addressing vehicle fuel economies and vehicle emissions standards; and enhanced building/utilities energy efficiencies mandated under California building codes (e.g., Title24, California Green Building Standards Code).

ENHANCED VEHICLE FUEL EFFICIENCIES

Project annual fuel consumption estimates presented previously in Table 4-9 represent likely potential maximums that would occur for the Project. Under subsequent future conditions, average fuel economies of vehicles accessing the Project site can be expected to improve as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands.

The Property Owner/Developer would comply with the City's transportation demand management ordinance (see Chapter 17.78 of the Development Code).

4.5 SUMMARY

4.5.1 CONSTRUCTION ENERGY DEMANDS

The estimated power cost of on-site electricity usage during the construction of the Project is assumed to be approximately $10,337.80. Additionally, based on the assumed power cost, it is estimated that the total electricity usage during construction, after full Project build-out, is calculated to be approximately 82,445 kWh.

Construction equipment used by the Project would result in single event consumption of approximately 117,251 gallons of diesel fuel. Construction equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the Project's proposed construction process that are unusual or energy-intensive, and Project construction equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies.

CCR Title 13, Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. BACMs inform construction equipment operators of this requirement. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

Construction worker trips for full construction of the Project would result in the estimated fuel consumption of 17,810 gallons of fuel. Additionally, fuel consumption from construction vendor trips (MHDTs and HHDTs) will total approximately 16,299 gallons. Diesel fuel would be supplied by City and regional commercial vendors. Indirectly, construction energy efficiencies and energy conservation would be achieved using bulk purchases, transport and use of construction materials. The 2020 IEPR released by the CEC has shown that fuel efficiencies are getting better within on and off-road vehicle engines due to more stringent government requirements (16). As supported by the preceding discussions, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

4.5.2 Operational Energy Demands

Transportation Energy Demands

Annual vehicular trips and related VMT generated by the operation of the Project would result in a fuel demand of 106,321 gallons of fuel.

Fuel would be provided by current and future commercial vendors. Trip generation and VMT generated by the Project are consistent with other industrial uses of similar scale and configuration, as reflected respectively in the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Ed., 2017); and CalEEMod. As such, Project operations would not result in excessive and wasteful vehicle trips and VMT, nor excess and wasteful vehicle energy consumption compared to other industrial uses.

It should be noted that the state strategy for the transportation sector for medium and heavy-duty trucks is focused on making trucks more efficient and expediting truck turnover rather than reducing VMT from trucks. This is in contrast to the passenger vehicle component of the transportation sector where both per-capita VMT reductions and an increase in vehicle efficiency are forecasted to be needed to achieve the overall state emissions reductions goals.

Heavy duty trucks involved in goods movements are generally controlled on the technology side and through fleet turnover of older trucks and engines to newer and cleaner trucks and engines. The first battery-electric heavy-heavy duty trucks are being tested this year and SCAQMD is

looking to integrate this new technology into large-scale truck operations. The following state strategies reduce GHG emissions from the medium and heavy-duty trucks:

- CARB's Mobile Source Strategy focuses on reducing GHGs through the transition to zero and low emission vehicles and from medium-duty and heavy-duty trucks.
- CARB's Sustainable Freight Action Plan establishes a goal to improve freight efficiency by 25 percent by 2030, deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.
- CARB's Emissions Reduction Plan for Ports and Goods Movement (Goods Movement Plan) in California focuses on reducing heavy-duty truck-related emissions focus on establishment of emissions standards for trucks, fleet turnover, truck retrofits, and restriction on truck idling (CARB 2006). While the focus of Goods Movement Plan is to reduce criteria air pollutant and air toxic emissions, the strategies to reduce these pollutants would also generally have a beneficial effect in reducing GHG emissions.
- CARB's On-Road Truck and Bus Regulation (2010) requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet particulate matter filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent (28).
- CARB's Heavy-Duty (Tractor-Trailer) GHG Regulation requires SmartWay tractor trailers that include idle-reduction technologies, aerodynamic technologies, and low-rolling resistant tires that would reduce fuel consumption and associated GHG emissions.

The proposed Project would implement project design features that would facilitate the accessibility, parking, and loading of trucks on site.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands. The Project would implement sidewalks, facilitating and encouraging pedestrian access. Facilitating pedestrian and bicycle access would reduce VMT and associated energy consumption. In compliance with the California Green Building Standards Code and City requirements, the Project would promote the use of bicycles as an alternative mean of transportation by providing short-term and/or long-term bicycle parking accommodations. As supported by the preceding discussions, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

FACILITY ENERGY DEMANDS

Project facility operational energy demands are estimated at: 408,736 kBTU/year of natural gas; and 488,613 kWh/year of electricity. Natural gas would be supplied to the Project by SoCalGas; electricity would be supplied by SCE. The Project proposes conventional industrial uses reflecting contemporary energy efficient/energy conserving designs and operational programs. The Project

does not propose uses that are inherently energy intensive and the energy demands in total would be comparable to other industrial uses of similar scale and configuration.

Lastly, the Project will comply with the applicable Title 24 standards. Compliance itself with applicable Title 24 standards will ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary.

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5 CONCLUSIONS

5.1 ENERGY IMPACT 1

Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

As supported by the preceding analyses, Project construction and operations would not result in the inefficient, wasteful, or unnecessary consumption of energy. The Project would therefore not cause or result in the need for additional energy producing or transmission facilities. The Project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California.

5.2 ENERGY IMPACT 2

Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The Project's consistency with the applicable state and local plans is discussed below.

CONSISTENCY WITH ISTEA

Transportation and access to the Project site is provided by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTEA because SCAG is not planning for intermodal facilities on or through the Project site.

CONSISTENCY WITH TEA-21

The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access, acts to reduce vehicle miles traveled, takes advantage of existing infrastructure systems, and promotes land use compatibilities through collocation of similar uses. The Project supports the strong planning processes emphasized under TEA-21. The Project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of TEA-21.

CONSISTENCY WITH IEPR

Electricity would be provided to the Project by SCE. SCE's *Clean Power and Electrification Pathway* (CPEP) white paper builds on existing state programs and policies. As such, the Project is consistent with, and would not otherwise interfere with, nor obstruct implementation the goals presented in the 2020 IEPR.

Additionally, the Project will comply with the applicable Title 24 standards which would ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary. As such, development of the proposed Project would support the goals presented in the 2020 IEPR.

CONSISTENCY WITH STATE OF CALIFORNIA ENERGY PLAN

The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access and takes advantage of existing infrastructure systems. The Project therefore supports urban design and planning processes identified under the State of California Energy Plan, is consistent with, and would not otherwise interfere with, nor obstruct implementation of the State of California Energy Plan.

CONSISTENCY WITH CALIFORNIA CODE TITLE 24, PART 6, ENERGY EFFICIENCY STANDARDS

The 2019 version of Title 24 was adopted by the CEC and became effective on January 1, 2020. It should be noted that the analysis herein assumes compliance with the 2019 Title 24 Standards. It should be noted that the CEC anticipates that nonresidential buildings will use approximately 30% less energy compared to the prior code (17). The proposed Project would be subject to Title 24 standards.

CONSISTENCY WITH CALIFORNIA CODE TITLE 24, PART 11, CALGREEN

As previously stated, CCR, Title 24, Part 11: CALGreen is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2009, and is administered by the California Building Standards Commission. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2019 California Green Building Code Standards that became effective January 1, 2020. The proposed Project would be subject to CALGreen standards.

CONSISTENCY WITH AB 1493

AB 1493 is not applicable to the Project as it is a statewide measure establishing vehicle emissions standards. No feature of the Project would interfere with implementation of the requirements under AB 1493.

CONSISTENCY WITH RPS

California's RPS is not applicable to the Project as it is a statewide measure that establishes a renewable energy mix. No feature of the Project would interfere with implementation of the requirements under RPS.

CONSISTENCY WITH SB 350

The proposed Project would use energy from SCE, which have committed to diversify their portfolio of energy sources by increasing energy from wind and solar sources. No feature of the Project would interfere with implementation of SB 350. Additionally, the Project would be designed and constructed to implement the energy efficiency measures for new industrial developments and would include several measures designed to reduce energy consumption.

As shown above, the Project would not conflict with any of the state or local plans. As such, a less than significant impact is expected.

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6 REFERENCES

1. **Association of Environmental Professionals.** *2020 CEQA California Environmental Quality Act.* 2020.
2. **City of Rialto.** *City of Rialto General Plan.* 2010.
3. **Administration, U.S. Energy Information.** California State Profile and Energy Estimates. [Online] https://www.eia.gov/state/data.php?sid=CA#ConsumptionExpenditures.
4. **California Energy Commission.** *Transportation Energy Demand Forecast 2018-2030.* 2018.
5. **Alternate Fuels Data Center.** ***U.S. Department of Energy.*** **[Online] https://afdc.energy.gov/states/ca.**
6. **U.S. Energy Information Administration. California Energy Consumption by End-Use Sector.** ***California State Profile and Energy Estimates.*** **[Online] https://www.eia.gov/state/?sid=CA#tabs-2.**
7. **California Energy Commission. 2020 Total System Electric Generation.** ***CA.gov.*** **[Online] https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation.**
8. **U.S. Energy Information Administration. California State Profile and Energy Estimates . [Online] https://www.eia.gov/state/?sid=CA.**
9. **California Energy Commission. 2013 Integrated Energy Policy Report. [Online] 2013. http://www.energy.ca.gov/2013publications/CEC-100-2013-001/CEC-100-2013-001-CMF.pdf.**
10. **—. California Energy Almanac.** ***Utility Energy Supply Plans from 2013.*** **[Online] https://www.energy.ca.gov/almanac/electricity_data/s-2_supply_forms_2013/.**
11. **California ISO. Understanding the ISO. [Online] http://www.caiso.com/about/Pages/OurBusiness/UnderstandingtheISO/default.aspx.**
12. **Southern Californai Edison. 2019 Power Content Label.** ***Southern California Edison.*** **[Online] https://www.sce.com/sites/default/files/inline-files/SCE_2019PowerContentLabel.pdf.**
13. **California Public Utilities Commission. Natural Gas and California. [Online] http://www.cpuc.ca.gov/general.aspx?id=4802.**
14. **Department of Motor Vehicles.** ***State of California Department of Motor Vehicles Statistics For Publication January Through December 2020.*** **2020.**
15. **U.S. Energy Information Administration. California Analysis.** ***Energy Information Administration.*** **[Online] https://www.eia.gov/beta/states/states/ca/analysis.**
16. **California Energy Commission Staff. 2020 Integrated Energy Policy Report Update. [Online] 2020. file:///C:/Users/atamase/Downloads/TN237269_20210323T095732_Final%202020%20Integrated%20%20Energy%20Policy%20Report%20%20Update%20Volume%20III%20California%20E%20(1).pdf.**
17. **The California Energy Commission. 2019 Building Energy Efficiency Standards .** ***California Energy Commission.*** **[Online] 2018. https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf.**
18. **California Energy Commission. Renewables Portfolio Standard (RPS). [Online] 2002. http://www.energy.ca.gov/portfolio/.**

19. State of California. ***California Environmental Quality Act Guideline, California Public Resources Code, Title 14, Division 6, Chapter 3,.***

20. Association of Environmental Professionals. ***2019 CEQA California Environmental Quality Act.*** **2019.**

21. Urban Crossroads, Inc. ***Durst Drive Warehouse Air Quality Impact Analysis.*** **2021.**

22. California Air Pollution Control Officers Association (CAPCOA). California Emissions Estimator Model (CalEEMod). [Online] September 2016. www.caleemod.com.

23. California Department of Transportation. EMFAC Software. [Online] http://www.dot.ca.gov/hq/env/air/pages/emfac.htm.

24. State of California. ***2019 CEQA California Environmental Quality Act.*** **2019.**

25. Pray, Richard. ***2021 National Construction Estimator.*** **Carlsbad : Craftsman Book Company, 2021.**

26. Southern California Edison. Schedule GS-1 General Service. ***Regulatory Information - Rates Pricing.*** **[Online] https://library.sce.com/content/dam/sce-doclib/public/regulatory/tariff/electric/schedules/general-service-&-industrial-rates/ELECTRIC_SCHEDULES_GS-1.pdf.**

27. California Air Resources Board. ***Methods to Find the Cost-Effectiveness of Funding Air Quality Projects For Evaluating Motor Vehicle Registration Fee Projects And Congestion Mitigation and Air Quality Improvement (CMAQ) Projects, Emission Factor Tables.*** **2018.**

28. —. Truck and Bus Regulation. [Online] https://ww2.arb.ca.gov/our-work/programs/truck-and-bus-regulation.

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7 CERTIFICATIONS

The contents of this energy analysis report represent an accurate depiction of the environmental impacts associated with the proposed Durst Drive Warehouse. The information contained in this energy analysis report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com.

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EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 4.1:

CALEEMOD CONSTRUCTION EMISSIONS MODEL OUTPUTS

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Durst Drive Warehouse (Construction - Unmitigated)

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	203.35	1000sqft	4.67	203,351.00	0
Parking Lot	183.00	Space	1.10	48,110.00	0
Other Asphalt Surfaces	145.08	1000sqft	3.33	145,079.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Project area is 9.10 acres

Construction Phase - Construction anticipated to begin July 2022 and end in June 2023

Off-road Equipment - Equipment based on consultation with Project Team

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment -

Off-road Equipment - Hours are based on an 8-hour workday

Grading - Analysis conservatively assumes that up to 10 acres can be disturbed per day

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition -

Trips and VMT - Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction

Architectural Coating - Rule 1113

Vehicle Trips - Construction run only

Energy Use - Construction run only

Water And Wastewater - Construction run only

Solid Waste - Construction run only

Construction Off-road Equipment Mitigation - Rule 403

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblConstructionPhase	NumDays	230.00	200.00
tblConstructionPhase	PhaseEndDate	9/21/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	7/27/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	8/24/2023	6/15/2023
tblConstructionPhase	PhaseStartDate	8/25/2023	5/19/2023
tblConstructionPhase	PhaseStartDate	7/28/2023	5/19/2023
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	LightingElect	1.17	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	0.33	0.00
tblEnergyUse	T24NG	1.98	0.00
tblGrading	AcresOfGrading	90.00	200.00
tblGrading	AcresOfGrading	35.00	100.00
tblGrading	MaterialExported	0.00	15,935.00
tblLandUse	LandUseSquareFeet	73,200.00	48,110.00
tblLandUse	LotAcreage	1.65	1.10

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	191.15	0.00
tblTripsAndVMT	HaulingTripLength	20.00	7.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	65.00	52.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CNW_TL	6.90	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	0.00
tblVehicleTrips	ST_TR	1.74	0.00
tblVehicleTrips	SU_TR	1.74	0.00
tblVehicleTrips	WD_TR	1.74	0.00
tblWater	IndoorWaterUseRate	47,024,687.50	0.00

2.0 Emissions Summary

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2186	2.2763	1.4722	4.5500e-003	0.4455	0.0872	0.5327	0.1335	0.0810	0.2145	0.0000	411.0112	411.0112	0.0777	0.0174	418.1252
2023	0.7084	1.8197	1.5873	4.3400e-003	0.1337	0.0739	0.2076	0.0360	0.0690	0.1049	0.0000	388.3094	388.3094	0.0704	0.0104	393.1641
Maximum	**0.7084**	**2.2763**	**1.5873**	**4.5500e-003**	**0.4455**	**0.0872**	**0.5327**	**0.1335**	**0.0810**	**0.2145**	**0.0000**	**411.0112**	**411.0112**	**0.0777**	**0.0174**	**418.1252**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2186	2.2763	1.4722	4.5500e-003	0.2408	0.0872	0.3279	0.0702	0.0810	0.1511	0.0000	411.0109	411.0109	0.0777	0.0174	418.1249
2023	0.7084	1.8197	1.5873	4.3400e-003	0.1337	0.0739	0.2076	0.0360	0.0690	0.1049	0.0000	388.3091	388.3091	0.0704	0.0104	393.1638
Maximum	**0.7084**	**2.2763**	**1.5873**	**4.5500e-003**	**0.2408**	**0.0872**	**0.3279**	**0.0702**	**0.0810**	**0.1511**	**0.0000**	**411.0109**	**411.0109**	**0.0777**	**0.0174**	**418.1249**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**35.35**	**0.00**	**27.66**	**37.38**	**0.00**	**19.84**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**7-1-2022**	**9-30-2022**	1.3054	1.3054
2	**10-1-2022**	**12-31-2022**	1.1890	1.1890
3	**1-1-2023**	**3-31-2023**	1.0216	1.0216
4	**4-1-2023**	**6-30-2023**	1.4992	1.4992
		Highest	1.4992	1.4992

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8449	6.0000e-005	6.7800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0132	0.0132	3.0000e-005	0.0000	0.0141
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.8449**	**6.0000e-005**	**6.7800e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0132**	**0.0132**	**3.0000e-005**	**0.0000**	**0.0141**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8449	6.0000e-005	6.7800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0132	0.0132	3.0000e-005	0.0000	0.0141
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.8449**	**6.0000e-005**	**6.7800e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0132**	**0.0132**	**3.0000e-005**	**0.0000**	**0.0141**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2022	7/28/2022	5	20	
2	Site Preparation	Site Preparation	7/29/2022	8/11/2022	5	10	
3	Grading	Grading	8/12/2022	9/8/2022	5	20	

4	Building Construction	Building Construction	9/9/2022	6/15/2023	5	200	
5	Paving	Paving	5/19/2023	6/15/2023	5	20	
6	Architectural Coating	Architectural Coating	5/19/2023	6/15/2023	5	20	

Acres of Grading (Site Preparation Phase): 100

Acres of Grading (Grading Phase): 200

Acres of Paving: 4.43

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 305,027; Non-Residential Outdoor: 101,676; Striped Parking Area: 11,591 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	8.00	78	0.48
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Demolition	Excavators	2	8.00	158	0.38
Grading	Excavators	0	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Welders	1	8.00	46	0.45
Demolition	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Grading	Crawler Tractors	3	8.00	212	0.43
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Crawler Tractors	3	8.00	212	0.43

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	5.00	232.00	14.70	6.90	7.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	5.00	1,992.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	167.00	52.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0251	0.0000	0.0251	3.8100e-003	0.0000	3.8100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7400e-003	0.0448	0.0789	1.2000e-004		2.0600e-003	2.0600e-003		1.9000e-003	1.9000e-003	0.0000	10.8827	10.8827	3.5200e-003	0.0000	10.9707
Total	**4.7400e-003**	**0.0448**	**0.0789**	**1.2000e-004**	**0.0251**	**2.0600e-003**	**0.0272**	**3.8100e-003**	**1.9000e-003**	**5.7100e-003**	**0.0000**	**10.8827**	**10.8827**	**3.5200e-003**	**0.0000**	**10.9707**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5000e-004	7.5100e-003	2.8300e-003	3.0000e-005	7.0000e-004	6.0000e-005	7.6000e-004	1.9000e-004	6.0000e-005	2.5000e-004	0.0000	2.6033	2.6033	1.1000e-004	4.1000e-004	2.7289
Vendor	9.0000e-005	2.3000e-003	8.2000e-004	1.0000e-005	3.2000e-004	3.0000e-005	3.4000e-004	9.0000e-005	2.0000e-005	1.2000e-004	0.0000	0.9079	0.9079	2.0000e-005	1.3000e-004	0.9486
Worker	3.0000e-004	2.4000e-004	2.8400e-003	1.0000e-005	8.8000e-004	0.0000	8.8000e-004	2.3000e-004	0.0000	2.4000e-004	0.0000	0.7036	0.7036	2.0000e-005	2.0000e-005	0.7102
Total	**6.4000e-004**	**0.0101**	**6.4900e-003**	**5.0000e-005**	**1.9000e-003**	**9.0000e-005**	**1.9800e-003**	**5.1000e-004**	**8.0000e-005**	**6.1000e-004**	**0.0000**	**4.2148**	**4.2148**	**1.5000e-004**	**5.6000e-004**	**4.3876**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.8100e-003	0.0000	9.8100e-003	1.4800e-003	0.0000	1.4800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7400e-003	0.0448	0.0789	1.2000e-004		2.0600e-003	2.0600e-003		1.9000e-003	1.9000e-003	0.0000	10.8827	10.8827	3.5200e-003	0.0000	10.9707
Total	**4.7400e-003**	**0.0448**	**0.0789**	**1.2000e-004**	**9.8100e-003**	**2.0600e-003**	**0.0119**	**1.4800e-003**	**1.9000e-003**	**3.3800e-003**	**0.0000**	**10.8827**	**10.8827**	**3.5200e-003**	**0.0000**	**10.9707**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5000e-004	7.5100e-003	2.8300e-003	3.0000e-005	7.0000e-004	6.0000e-005	7.6000e-004	1.9000e-004	6.0000e-005	2.5000e-004	0.0000	2.6033	2.6033	1.1000e-004	4.1000e-004	2.7289
Vendor	9.0000e-005	2.3000e-003	8.2000e-004	1.0000e-005	3.2000e-004	3.0000e-005	3.4000e-004	9.0000e-005	2.0000e-005	1.2000e-004	0.0000	0.9079	0.9079	2.0000e-005	1.3000e-004	0.9486
Worker	3.0000e-004	2.4000e-004	2.8400e-003	1.0000e-005	8.8000e-004	0.0000	8.8000e-004	2.3000e-004	0.0000	2.4000e-004	0.0000	0.7036	0.7036	2.0000e-005	2.0000e-005	0.7102
Total	**6.4000e-004**	**0.0101**	**6.4900e-003**	**5.0000e-005**	**1.9000e-003**	**9.0000e-005**	**1.9800e-003**	**5.1000e-004**	**8.0000e-005**	**6.1000e-004**	**0.0000**	**4.2148**	**4.2148**	**1.5000e-004**	**5.6000e-004**	**4.3876**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1434	0.0000	0.1434	0.0554	0.0000	0.0554	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0224	0.2517	0.0999	2.8000e-004		0.0108	0.0108		9.9200e-003	9.9200e-003	0.0000	24.9873	24.9873	8.0800e-003	0.0000	25.1894
Total	**0.0224**	**0.2517**	**0.0999**	**2.8000e-004**	**0.1434**	**0.0108**	**0.1541**	**0.0554**	**9.9200e-003**	**0.0653**	**0.0000**	**24.9873**	**24.9873**	**8.0800e-003**	**0.0000**	**25.1894**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	6.9000e-004	2.4000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	3.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.2724	0.2724	1.0000e-005	4.0000e-005	0.2846
Worker	3.4000e-004	2.7000e-004	3.1900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7916	0.7916	2.0000e-005	2.0000e-005	0.7989
Total	**3.7000e-004**	**9.6000e-004**	**3.4300e-003**	**1.0000e-005**	**1.0800e-003**	**2.0000e-005**	**1.0900e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**1.0640**	**1.0640**	**3.0000e-005**	**6.0000e-005**	**1.0835**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0559	0.0000	0.0559	0.0216	0.0000	0.0216	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0224	0.2517	0.0999	2.8000e-004		0.0108	0.0108		9.9200e-003	9.9200e-003	0.0000	24.9873	24.9873	8.0800e-003	0.0000	25.1893
Total	**0.0224**	**0.2517**	**0.0999**	**2.8000e-004**	**0.0559**	**0.0108**	**0.0667**	**0.0216**	**9.9200e-003**	**0.0315**	**0.0000**	**24.9873**	**24.9873**	**8.0800e-003**	**0.0000**	**25.1893**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	6.9000e-004	2.4000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	3.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.2724	0.2724	1.0000e-005	4.0000e-005	0.2846
Worker	3.4000e-004	2.7000e-004	3.1900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7916	0.7916	2.0000e-005	2.0000e-005	0.7989
Total	**3.7000e-004**	**9.6000e-004**	**3.4300e-003**	**1.0000e-005**	**1.0800e-003**	**2.0000e-005**	**1.0900e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**1.0640**	**1.0640**	**3.0000e-005**	**6.0000e-005**	**1.0835**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1672	0.0000	0.1672	0.0447	0.0000	0.0447	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0437	0.5000	0.2504	6.9000e-004		0.0197	0.0197		0.0181	0.0181	0.0000	60.7301	60.7301	0.0196	0.0000	61.2211
Total	**0.0437**	**0.5000**	**0.2504**	**6.9000e-004**	**0.1672**	**0.0197**	**0.1868**	**0.0447**	**0.0181**	**0.0628**	**0.0000**	**60.7301**	**60.7301**	**0.0196**	**0.0000**	**61.2211**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.7000e-003	0.1435	0.0358	5.9000e-004	0.0172	1.4300e-003	0.0186	4.7100e-003	1.3700e-003	6.0800e-003	0.0000	57.8877	57.8877	2.4700e-003	9.1700e-003	60.6833
Vendor	9.0000e-005	2.3000e-003	8.2000e-004	1.0000e-005	3.2000e-004	3.0000e-005	3.4000e-004	9.0000e-005	2.0000e-005	1.2000e-004	0.0000	0.9079	0.9079	2.0000e-005	1.3000e-004	0.9486
Worker	6.8000e-004	5.3000e-004	6.3900e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9800e-003	5.2000e-004	1.0000e-005	5.3000e-004	0.0000	1.5832	1.5832	5.0000e-005	5.0000e-005	1.5978
Total	**4.4700e-003**	**0.1463**	**0.0430**	**6.2000e-004**	**0.0194**	**1.4700e-003**	**0.0209**	**5.3200e-003**	**1.4000e-003**	**6.7300e-003**	**0.0000**	**60.3788**	**60.3788**	**2.5400e-003**	**9.3500e-003**	**63.2297**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0652	0.0000	0.0652	0.0174	0.0000	0.0174	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0437	0.5000	0.2504	6.9000e-004		0.0197	0.0197		0.0181	0.0181	0.0000	60.7300	60.7300	0.0196	0.0000	61.2211
Total	**0.0437**	**0.5000**	**0.2504**	**6.9000e-004**	**0.0652**	**0.0197**	**0.0849**	**0.0174**	**0.0181**	**0.0355**	**0.0000**	**60.7300**	**60.7300**	**0.0196**	**0.0000**	**61.2211**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.7000e-003	0.1435	0.0358	5.9000e-004	0.0172	1.4300e-003	0.0186	4.7100e-003	1.3700e-003	6.0800e-003	0.0000	57.8877	57.8877	2.4700e-003	9.1700e-003	60.6833
Vendor	9.0000e-005	2.3000e-003	8.2000e-004	1.0000e-005	3.2000e-004	3.0000e-005	3.4000e-004	9.0000e-005	2.0000e-005	1.2000e-004	0.0000	0.9079	0.9079	2.0000e-005	1.3000e-004	0.9486
Worker	6.8000e-004	5.3000e-004	6.3900e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9800e-003	5.2000e-004	1.0000e-005	5.3000e-004	0.0000	1.5832	1.5832	5.0000e-005	5.0000e-005	1.5978
Total	**4.4700e-003**	**0.1463**	**0.0430**	**6.2000e-004**	**0.0194**	**1.4700e-003**	**0.0209**	**5.3200e-003**	**1.4000e-003**	**6.7300e-003**	**0.0000**	**60.3788**	**60.3788**	**2.5400e-003**	**9.3500e-003**	**63.2297**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1133	1.2054	0.7156	1.7400e-003		0.0516	0.0516		0.0482	0.0482	0.0000	151.0250	151.0250	0.0410	0.0000	152.0494
Total	**0.1133**	**1.2054**	**0.7156**	**1.7400e-003**		**0.0516**	**0.0516**		**0.0482**	**0.0482**	**0.0000**	**151.0250**	**151.0250**	**0.0410**	**0.0000**	**152.0494**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5900e-003	0.0970	0.0344	3.9000e-004	0.0133	1.1000e-003	0.0144	3.8300e-003	1.0500e-003	4.8800e-003	0.0000	38.2416	38.2416	1.0300e-003	5.6600e-003	39.9550
Worker	0.0255	0.0200	0.2400	6.4000e-004	0.0742	4.0000e-004	0.0746	0.0197	3.7000e-004	0.0201	0.0000	59.4870	59.4870	1.6900e-003	1.7100e-003	60.0388
Total	**0.0291**	**0.1170**	**0.2744**	**1.0300e-003**	**0.0874**	**1.5000e-003**	**0.0889**	**0.0235**	**1.4200e-003**	**0.0249**	**0.0000**	**97.7285**	**97.7285**	**2.7200e-003**	**7.3700e-003**	**99.9938**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1133	1.2054	0.7156	1.7400e-003		0.0516	0.0516		0.0482	0.0482	0.0000	151.0248	151.0248	0.0410	0.0000	152.0492
Total	**0.1133**	**1.2054**	**0.7156**	**1.7400e-003**		**0.0516**	**0.0516**		**0.0482**	**0.0482**	**0.0000**	**151.0248**	**151.0248**	**0.0410**	**0.0000**	**152.0492**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5900e-003	0.0970	0.0344	3.9000e-004	0.0133	1.1000e-003	0.0144	3.8300e-003	1.0500e-003	4.8800e-003	0.0000	38.2416	38.2416	1.0300e-003	5.6600e-003	39.9550
Worker	0.0255	0.0200	0.2400	6.4000e-004	0.0742	4.0000e-004	0.0746	0.0197	3.7000e-004	0.0201	0.0000	59.4870	59.4870	1.6900e-003	1.7100e-003	60.0388
Total	**0.0291**	**0.1170**	**0.2744**	**1.0300e-003**	**0.0874**	**1.5000e-003**	**0.0889**	**0.0235**	**1.4200e-003**	**0.0249**	**0.0000**	**97.7285**	**97.7285**	**2.7200e-003**	**7.3700e-003**	**99.9938**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1518	1.5592	1.0322	2.5600e-003		0.0665	0.0665		0.0620	0.0620	0.0000	221.7525	221.7525	0.0599	0.0000	223.2505
Total	**0.1518**	**1.5592**	**1.0322**	**2.5600e-003**		**0.0665**	**0.0665**		**0.0620**	**0.0620**	**0.0000**	**221.7525**	**221.7525**	**0.0599**	**0.0000**	**223.2505**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4900e-003	0.1142	0.0462	5.5000e-004	0.0195	8.2000e-004	0.0203	5.6300e-003	7.8000e-004	6.4100e-003	0.0000	53.9232	53.9232	1.4000e-003	7.9700e-003	56.3330
Worker	0.0346	0.0258	0.3233	9.2000e-004	0.1090	5.5000e-004	0.1095	0.0289	5.1000e-004	0.0294	0.0000	85.0921	85.0921	2.2300e-003	2.3100e-003	85.8359
Total	**0.0381**	**0.1400**	**0.3695**	**1.4700e-003**	**0.1285**	**1.3700e-003**	**0.1298**	**0.0346**	**1.2900e-003**	**0.0359**	**0.0000**	**139.0152**	**139.0152**	**3.6300e-003**	**0.0103**	**142.1689**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1518	1.5592	1.0322	2.5600e-003		0.0665	0.0665		0.0620	0.0620	0.0000	221.7522	221.7522	0.0599	0.0000	223.2502
Total	**0.1518**	**1.5592**	**1.0322**	**2.5600e-003**		**0.0665**	**0.0665**		**0.0620**	**0.0620**	**0.0000**	**221.7522**	**221.7522**	**0.0599**	**0.0000**	**223.2502**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4900e-003	0.1142	0.0462	5.5000e-004	0.0195	8.2000e-004	0.0203	5.6300e-003	7.8000e-004	6.4100e-003	0.0000	53.9232	53.9232	1.4000e-003	7.9700e-003	56.3330
Worker	0.0346	0.0258	0.3233	9.2000e-004	0.1090	5.5000e-004	0.1095	0.0289	5.1000e-004	0.0294	0.0000	85.0921	85.0921	2.2300e-003	2.3100e-003	85.8359
Total	**0.0381**	**0.1400**	**0.3695**	**1.4700e-003**	**0.1285**	**1.3700e-003**	**0.1298**	**0.0346**	**1.2900e-003**	**0.0359**	**0.0000**	**139.0152**	**139.0152**	**3.6300e-003**	**0.0103**	**142.1689**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888
Paving	5.8000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0161**	**0.1019**	**0.1458**	**2.3000e-004**		**5.1000e-003**	**5.1000e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**20.0269**	**20.0269**	**6.4800e-003**	**0.0000**	**20.1888**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.9000e-004	4.8800e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.4000e-004	0.0000	1.2845	1.2845	3.0000e-005	3.0000e-005	1.2958
Total	**5.2000e-004**	**3.9000e-004**	**4.8800e-003**	**1.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6500e-003**	**4.4000e-004**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**1.2845**	**1.2845**	**3.0000e-005**	**3.0000e-005**	**1.2958**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888
Paving	5.8000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0161**	**0.1019**	**0.1458**	**2.3000e-004**		**5.1000e-003**	**5.1000e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**20.0268**	**20.0268**	**6.4800e-003**	**0.0000**	**20.1888**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.9000e-004	4.8800e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.4000e-004	0.0000	1.2845	1.2845	3.0000e-005	3.0000e-005	1.2958
Total	**5.2000e-004**	**3.9000e-004**	**4.8800e-003**	**1.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6500e-003**	**4.4000e-004**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**1.2845**	**1.2845**	**3.0000e-005**	**3.0000e-005**	**1.2958**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4981					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5600e-003	0.0174	0.0242	4.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	3.4043	3.4043	2.0000e-004	0.0000	3.4094
Total	**0.5007**	**0.0174**	**0.0242**	**4.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**3.4043**	**3.4043**	**2.0000e-004**	**0.0000**	**3.4094**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1500e-003	8.6000e-004	0.0107	3.0000e-005	3.6200e-003	2.0000e-005	3.6400e-003	9.6000e-004	2.0000e-005	9.8000e-004	0.0000	2.8260	2.8260	7.0000e-005	8.0000e-005	2.8507
Total	**1.1500e-003**	**8.6000e-004**	**0.0107**	**3.0000e-005**	**3.6200e-003**	**2.0000e-005**	**3.6400e-003**	**9.6000e-004**	**2.0000e-005**	**9.8000e-004**	**0.0000**	**2.8260**	**2.8260**	**7.0000e-005**	**8.0000e-005**	**2.8507**

3.7 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4981					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5600e-003	0.0174	0.0242	4.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	3.4043	3.4043	2.0000e-004	0.0000	3.4094
Total	**0.5007**	**0.0174**	**0.0242**	**4.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**3.4043**	**3.4043**	**2.0000e-004**	**0.0000**	**3.4094**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1500e-003	8.6000e-004	0.0107	3.0000e-005	3.6200e-003	2.0000e-005	3.6400e-003	9.6000e-004	2.0000e-005	9.8000e-004	0.0000	2.8260	2.8260	7.0000e-005	8.0000e-005	2.8507
Total	**1.1500e-003**	**8.6000e-004**	**0.0107**	**3.0000e-005**	**3.6200e-003**	**2.0000e-005**	**3.6400e-003**	**9.6000e-004**	**2.0000e-005**	**9.8000e-004**	**0.0000**	**2.8260**	**2.8260**	**7.0000e-005**	**8.0000e-005**	**2.8507**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Parking Lot	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Unrefrigerated Warehouse-No Rail	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8449	6.0000e-005	6.7800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0132	0.0132	3.0000e-005	0.0000	0.0141
Unmitigated	0.8449	6.0000e-005	6.7800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0132	0.0132	3.0000e-005	0.0000	0.0141

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0969					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7473					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.3000e-004	6.0000e-005	6.7800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0132	0.0132	3.0000e-005	0.0000	0.0141
Total	**0.8449**	**6.0000e-005**	**6.7800e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0132**	**0.0132**	**3.0000e-005**	**0.0000**	**0.0141**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0969					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7473					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.3000e-004	6.0000e-005	6.7800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0132	0.0132	3.0000e-005	0.0000	0.0141
Total	**0.8449**	**6.0000e-005**	**6.7800e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0132**	**0.0132**	**3.0000e-005**	**0.0000**	**0.0141**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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APPENDIX 4.2:

CALEEMOD OPERATIONAL EMISSIONS MODEL OUTPUTS

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Durst Drive Warehouse (Operations)

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	203.35	1000sqft	4.67	203,351.00	0
User Defined Industrial	203.35	User Defined Unit	0.00	0.00	0
Parking Lot	183.00	Space	1.10	48,110.00	0
Other Asphalt Surfaces	145.08	1000sqft	3.33	145,079.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Project area is 9.10 acres

Construction Phase - Operatiosn run only

Off-road Equipment - Operatiosn run only

Vehicle Trips - Trip rates based on ITE 11th Edition for High-Cube Transload Short-Term Warehouse (ITE Code 154)

Fleet Mix - Passenger Car Mix estimated based on the CalEEMod default fleet mix and the ratio of LDA, LDT1, LDT2, MDV, & MCY. Truck Mix based ratio of LHDT1, LHDT2, MHDT, and HHDT

Operational Off-Road Equipment - Based on SCAQMD High Cube Warehouse Truck Trip Study White Paper Summary of Busniess Survey Results (2014)

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	7/28/2022	6/30/2022
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.63
tblFleetMix	LDA	0.54	0.58
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.19
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.14
tblFleetMix	LHD2	7.1960e-003	0.00
tblFleetMix	LHD2	7.1960e-003	0.04
tblFleetMix	MCY	0.03	0.03
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.14	0.15
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	5.0710e-003	0.00
tblFleetMix	MH	5.0710e-003	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.20
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LandUseSquareFeet	73,200.00	48,110.00
tblLandUse	LotAcreage	1.65	1.10
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperHorsePower	97.00	200.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblVehicleTrips	CW_TL	16.60	40.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.74	0.79
tblVehicleTrips	ST_TR	0.00	0.15
tblVehicleTrips	SU_TR	1.74	0.73
tblVehicleTrips	SU_TR	0.00	0.14
tblVehicleTrips	WD_TR	1.74	1.18
tblVehicleTrips	WD_TR	0.00	0.23

2.0 Emissions Summary

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8451	9.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0182	0.0182	5.0000e-005	0.0000	0.0194
Energy	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	108.4650	108.4650	7.7300e-003	1.2900e-003	109.0416
Mobile	0.1610	1.4056	1.8787	0.0100	0.6061	0.0148	0.6210	0.1651	0.0141	0.1792	0.0000	964.8877	964.8877	0.0388	0.1099	998.6041
Offroad	0.0201	0.1891	0.1367	5.8000e-004		6.8600e-003	6.8600e-003		6.3100e-003	6.3100e-003	0.0000	50.7519	50.7519	0.0164	0.0000	51.1623
Waste						0.0000	0.0000		0.0000	0.0000	38.8017	0.0000	38.8017	2.2931	0.0000	96.1296
Water						0.0000	0.0000		0.0000	0.0000	14.9188	108.5902	123.5089	1.5415	0.0373	173.1586
Total	**1.0284**	**1.6148**	**2.0417**	**0.0107**	**0.6061**	**0.0233**	**0.6294**	**0.1651**	**0.0220**	**0.1870**	**53.7205**	**1,232.7130**	**1,286.4335**	**3.8976**	**0.1485**	**1,428.1156**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8451	9.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0182	0.0182	5.0000e-005	0.0000	0.0194
Energy	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	108.4650	108.4650	7.7300e-003	1.2900e-003	109.0416
Mobile	0.1610	1.4056	1.8787	0.0100	0.6061	0.0148	0.6210	0.1651	0.0141	0.1792	0.0000	964.8877	964.8877	0.0388	0.1099	998.6041
Offroad	0.0201	0.1891	0.1367	5.8000e-004		6.8600e-003	6.8600e-003		6.3100e-003	6.3100e-003	0.0000	50.7519	50.7519	0.0164	0.0000	51.1623
Waste						0.0000	0.0000		0.0000	0.0000	38.8017	0.0000	38.8017	2.2931	0.0000	96.1296
Water						0.0000	0.0000		0.0000	0.0000	14.9188	108.5902	123.5089	1.5415	0.0373	173.1586
Total	**1.0284**	**1.6148**	**2.0417**	**0.0107**	**0.6061**	**0.0233**	**0.6294**	**0.1651**	**0.0220**	**0.1870**	**53.7205**	**1,232.7130**	**1,286.4335**	**3.8976**	**0.1485**	**1,428.1156**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2022	6/30/2022	5	0	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 4.43

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1610	1.4056	1.8787	0.0100	0.6061	0.0148	0.6210	0.1651	0.0141	0.1792	0.0000	964.8877	964.8877	0.0388	0.1099	998.6041
Unmitigated	0.1610	1.4056	1.8787	0.0100	0.6061	0.0148	0.6210	0.1651	0.0141	0.1792	0.0000	964.8877	964.8877	0.0388	0.1099	998.6041

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	239.00	160.30	148.36	920,608	920,608
User Defined Industrial	46.00	30.85	28.55	601,929	601,929
Total	285.00	191.15	176.92	1,522,537	1,522,537

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
User Defined Industrial	40.00	8.40	6.90	100.00	0.00	0.00	100	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Parking Lot	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Unrefrigerated Warehouse-No Rail	0.578100	0.060000	0.185300	0.149400	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.027200	0.000000	0.000000
User Defined Industrial	0.000000	0.000000	0.000000	0.000000	0.137300	0.036600	0.195700	0.630400	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	86.6533	86.6533	7.3100e-003	8.9000e-004	87.1003
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	86.6533	86.6533	7.3100e-003	8.9000e-004	87.1003
NaturalGas Mitigated	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.8117	21.8117	4.2000e-004	4.0000e-004	21.9413
NaturalGas Unmitigated	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.8117	21.8117	4.2000e-004	4.0000e-004	21.9413

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	408736	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.8117	21.8117	4.2000e-004	4.0000e-004	21.9413
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.2000e-003**	**0.0200**	**0.0168**	**1.2000e-004**		**1.5200e-003**	**1.5200e-003**		**1.5200e-003**	**1.5200e-003**	**0.0000**	**21.8117**	**21.8117**	**4.2000e-004**	**4.0000e-004**	**21.9413**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	408736	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.8117	21.8117	4.2000e-004	4.0000e-004	21.9413
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.2000e-003**	**0.0200**	**0.0168**	**1.2000e-004**		**1.5200e-003**	**1.5200e-003**		**1.5200e-003**	**1.5200e-003**	**0.0000**	**21.8117**	**21.8117**	**4.2000e-004**	**4.0000e-004**	**21.9413**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	16838.5	2.9862	2.5000e-004	3.0000e-005	3.0016
Unrefrigerated Warehouse-No Rail	471774	83.6671	7.0600e-003	8.6000e-004	84.0987
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**86.6533**	**7.3100e-003**	**8.9000e-004**	**87.1003**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	16838.5	2.9862	2.5000e-004	3.0000e-005	3.0016
Unrefrigerated Warehouse-No Rail	471774	83.6671	7.0600e-003	8.6000e-004	84.0987
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**86.6533**	**7.3100e-003**	**8.9000e-004**	**87.1003**

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8451	9.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0182	0.0182	5.0000e-005	0.0000	0.0194
Unmitigated	0.8451	9.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0182	0.0182	5.0000e-005	0.0000	0.0194

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0969					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7473					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.7000e-004	9.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0182	0.0182	5.0000e-005	0.0000	0.0194
Total	**0.8451**	**9.0000e-005**	**9.3800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0182**	**0.0182**	**5.0000e-005**	**0.0000**	**0.0194**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0969					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7473					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.7000e-004	9.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0182	0.0182	5.0000e-005	0.0000	0.0194
Total	**0.8451**	**9.0000e-005**	**9.3800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0182**	**0.0182**	**5.0000e-005**	**0.0000**	**0.0194**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	123.5089	1.5415	0.0373	173.1586
Unmitigated	123.5089	1.5415	0.0373	173.1586

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	47.0247 / 0	123.5089	1.5415	0.0373	173.1586
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**123.5089**	**1.5415**	**0.0373**	**173.1586**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	47.0247 / 0	123.5089	1.5415	0.0373	173.1586
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**123.5089**	**1.5415**	**0.0373**	**173.1586**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	38.8017	2.2931	0.0000	96.1296
Unmitigated	38.8017	2.2931	0.0000	96.1296

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	191.15	38.8017	2.2931	0.0000	96.1296
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**38.8017**	**2.2931**	**0.0000**	**96.1296**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	191.15	38.8017	2.2931	0.0000	96.1296
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**38.8017**	**2.2931**	**0.0000**	**96.1296**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Tractors/Loaders/Backhoes	1	4.00	365	200	0.37	CNG

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Tractors/Loaders/ Backhoes	0.0201	0.1891	0.1367	5.8000e-004		6.8600e-003	6.8600e-003		6.3100e-003	6.3100e-003	0.0000	50.7519	50.7519	0.0164	0.0000	51.1623
Total	**0.0201**	**0.1891**	**0.1367**	**5.8000e-004**		**6.8600e-003**	**6.8600e-003**		**6.3100e-003**	**6.3100e-003**	**0.0000**	**50.7519**	**50.7519**	**0.0164**	**0.0000**	**51.1623**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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APPENDIX 4.3:

EMFAC2017

Source: EMFAC2017 (v1.0.3) Emissions Inventory
Region Type: Sub-Area
Region: San Bernardino (SC)
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/year for VMT, trips/year for Trips, tons/year for Emissions, 1000 gallons/year for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Fuel_Consumption	Fuel_Consumption	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
San Bernardino (SC)	2022	HHDT	Aggregate	Aggregate	Gasoline	5.738390567	155527.0487	36.74937282	36749.37282	90545128.73	155527.0487	573105922.7	6.33	HHDT
San Bernardino (SC)	2022	HHDT	Aggregate	Aggregate	Diesel	14883.97368	558215252.9	83675.52487	83675524.87		558215252.9			
San Bernardino (SC)	2022	HHDT	Aggregate	Aggregate	Natural Gas	1157.767624	14735142.78	6832.854482	6832854.482		14735142.78			
San Bernardino (SC)	2022	LDA	Aggregate	Aggregate	Gasoline	543957.3772	8003887181	255308.1705	255308170.5	256645670.1	8003887181	8194734512	31.93	LDA
San Bernardino (SC)	2022	LDA	Aggregate	Aggregate	Diesel	4325.601093	68627798.68	1337.499668	1337499.668		68627798.68			
San Bernardino (SC)	2022	LDA	Aggregate	Aggregate	Electricity	8565.692529	122219532	0	0		122219532			
San Bernardino (SC)	2022	LDT1	Aggregate	Aggregate	Gasoline	56195.86841	700914533	26342.70594	26342705.94	26350763.16	700914533	705927417.3	26.79	LDT1
San Bernardino (SC)	2022	LDT1	Aggregate	Aggregate	Diesel	30.18816941	197564.7434	8.057214819	8057.214819		197564.7434			
San Bernardino (SC)	2022	LDT1	Aggregate	Aggregate	Electricity	324.4928921	4815319.634	0	0		4815319.634			
San Bernardino (SC)	2022	LDT2	Aggregate	Aggregate	Gasoline	172388.4413	2256988324	90640.59688	90640596.88	91018628.27	2256988324	2288667928	25.15	LDT2
San Bernardino (SC)	2022	LDT2	Aggregate	Aggregate	Diesel	945.5703737	14319262.77	378.0313955	378031.3955		14319262.77			
San Bernardino (SC)	2022	LDT2	Aggregate	Aggregate	Electricity	1538.819096	17360341.36	0	0		17360341.36			
San Bernardino (SC)	2022	LHDT1	Aggregate	Aggregate	Gasoline	14369.52529	158250482.5	15027.15478	15027154.78	21692554.65	158250482.5	298218831.7	13.75	LHDT1
San Bernardino (SC)	2022	LHDT1	Aggregate	Aggregate	Diesel	11813.96292	139968349.2	6665.399872	6665399.872		139968349.2			
San Bernardino (SC)	2022	LHDT2	Aggregate	Aggregate	Gasoline	2566.416218	27740980.9	3032.958362	3032958.362	5807317.577	27740980.9	80571910.06	13.87	LHDT2
San Bernardino (SC)	2022	LHDT2	Aggregate	Aggregate	Diesel	4468.655223	52830929.16	2774.359214	2774359.214		52830929.16			
San Bernardino (SC)	2022	MCY	Aggregate	Aggregate	Gasoline	23940.89968	53658643.41	1441.204319	1441204.319	1441204.319	53658643.41	53658643.41	37.23	MCY
San Bernardino (SC)	2022	MDV	Aggregate	Aggregate	Gasoline	141538.2102	1785040768	88697.92747	88697927.47	90114172.33	1785040768	1834751411	20.36	MDV
San Bernardino (SC)	2022	MDV	Aggregate	Aggregate	Diesel	2634.747756	40101524.17	1416.244854	1416244.854		40101524.17			
San Bernardino (SC)	2022	MDV	Aggregate	Aggregate	Electricity	829.5186217	9609119.266	0	0		9609119.266			
San Bernardino (SC)	2022	MH	Aggregate	Aggregate	Gasoline	3599.155888	9916961.959	1944.446545	1944446.545	2304601.909	9916961.959	13695573.76	5.94	MH
San Bernardino (SC)	2022	MH	Aggregate	Aggregate	Diesel	1326.593838	3778611.798	360.1553639	360155.3639		3778611.798			
San Bernardino (SC)	2022	MHDT	Aggregate	Aggregate	Gasoline	1426.666165	25628051.67	4968.004374	4968004.374	32767512.56	25628051.67	329130159.5	10.04	MHDT
San Bernardino (SC)	2022	MHDT	Aggregate	Aggregate	Diesel	14492.29473	303502107.8	27799.50819	27799508.19		303502107.8			
San Bernardino (SC)	2022	OBUS	Aggregate	Aggregate	Gasoline	409.5822199	6003172.123	1176.027672	1176027.672	1769400.746	6003172.123	11140996.44	6.30	OBUS
San Bernardino (SC)	2022	OBUS	Aggregate	Aggregate	Diesel	235.5339692	5137824.321	593.3730743	593373.0743		5137824.321			
San Bernardino (SC)	2022	SBUS	Aggregate	Aggregate	Gasoline	236.4064257	3372369.288	373.4020376	373402.0376	1399993.563	3372369.288	11279699.81	8.06	SBUS
San Bernardino (SC)	2022	SBUS	Aggregate	Aggregate	Diesel	761.8554538	7907330.525	1026.591525	1026591.525		7907330.525			
San Bernardino (SC)	2022	UBUS	Aggregate	Aggregate	Gasoline	114.8207422	4270081.844	468.8649316	468864.9316	2862231.797	4270081.844	13493970.63	4.71	UBUS
San Bernardino (SC)	2022	UBUS	Aggregate	Aggregate	Diesel	2.896720367	77918.75906	10.36010717	10360.10717		77918.75906			
San Bernardino (SC)	2022	UBUS	Aggregate	Aggregate	Electricity	0.058469431	409.3068597	0	0		409.3068597			
San Bernardino (SC)	2022	UBUS	Aggregate	Aggregate	Natural Gas	209.2602095	9145560.716	2383.006759	2383006.759		9145560.716			

Source: EMFAC2017 (v1.0.3) Emissions Inventory
Region Type: Sub-Area
Region: San Bernardino (SC)
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/year for VMT, trips/year for Trips, tons/year for Emissions, 1000 gallons/year for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Fuel_Consumption	Fuel_Consumption	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
San Bernardino (SC)	2023	HHDT	Aggregate	Aggregate	Gasoline	5.400593394	164187.5315	37.76919618	37769.19618	87390254.33	164187.5315	585365056.5	6.70	HHDT
San Bernardino (SC)	2023	HHDT	Aggregate	Aggregate	Diesel	15095.86478	570245081.8	80483.09166	80483091.66		570245081.8			
San Bernardino (SC)	2023	HHDT	Aggregate	Aggregate	Natural Gas	1175.154539	14955787.2	6869.393481	6869393.481		14955787.2			
San Bernardino (SC)	2023	LDA	Aggregate	Aggregate	Gasoline	555433.9887	8090918025	251204.1364	251204136.4	252603243.7	8090918025	8318174958	32.93	LDA
San Bernardino (SC)	2023	LDA	Aggregate	Aggregate	Diesel	4696.473683	73620833.51	1399.107302	1399107.302		73620833.51			
San Bernardino (SC)	2023	LDA	Aggregate	Aggregate	Electricity	10560.61473	153636098.9	0	0		153636098.9			
San Bernardino (SC)	2023	LDT1	Aggregate	Aggregate	Gasoline	57435.69648	713711410	26102.02649	26102026.49	26109387.91	713711410	720760070.1	27.61	LDT1
San Bernardino (SC)	2023	LDT1	Aggregate	Aggregate	Diesel	27.83949786	183349.8103	7.361418746	7361.418746		183349.8103			
San Bernardino (SC)	2023	LDT1	Aggregate	Aggregate	Electricity	453.6221413	6865310.341	0	0		6865310.341			
San Bernardino (SC)	2023	LDT2	Aggregate	Aggregate	Gasoline	175777.3245	2283229723	88498.90554	88498905.54	88901967.13	2283229723	2321149104	26.11	LDT2
San Bernardino (SC)	2023	LDT2	Aggregate	Aggregate	Diesel	1056.541176	15695639.6	403.0615949	403061.5949		15695639.6			
San Bernardino (SC)	2023	LDT2	Aggregate	Aggregate	Electricity	2008.453069	22223741.56	0	0		22223741.56			
San Bernardino (SC)	2023	LHDT1	Aggregate	Aggregate	Gasoline	14140.97932	155222800.6	14573.89099	14573890.99	21168222.85	155222800.6	295637162.1	13.97	LHDT1
San Bernardino (SC)	2023	LHDT1	Aggregate	Aggregate	Diesel	11984.03744	140414361.4	6594.331861	6594331.861		140414361.4			
San Bernardino (SC)	2023	LHDT2	Aggregate	Aggregate	Gasoline	2533.759331	27110654	2934.846533	2934846.533	5695818.93	27110654	80410352.19	14.12	LHDT2
San Bernardino (SC)	2023	LHDT2	Aggregate	Aggregate	Diesel	4571.554127	53299698.19	2760.972397	2760972.397		53299698.19			
San Bernardino (SC)	2023	MCY	Aggregate	Aggregate	Gasoline	24261.81864	53526847.63	1438.472	1438472	1438472	53526847.63	53526847.63	37.21	MCY
San Bernardino (SC)	2023	MDV	Aggregate	Aggregate	Gasoline	141130.9241	1766492118	84981.71159	84981711.59	86443959.75	1766492118	1822544004	21.08	MDV
San Bernardino (SC)	2023	MDV	Aggregate	Aggregate	Diesel	2857.762015	42605259.66	1462.248161	1462248.161		42605259.66			
San Bernardino (SC)	2023	MDV	Aggregate	Aggregate	Electricity	1186.159904	13446626.78	0	0		13446626.78			
San Bernardino (SC)	2023	MH	Aggregate	Aggregate	Gasoline	3469.463758	9547199.217	1851.925199	1851925.199	2205323.135	9547199.217	13285933.32	6.02	MH
San Bernardino (SC)	2023	MH	Aggregate	Aggregate	Diesel	1336.12691	3738734.1	353.3979358	353397.9358		3738734.1			
San Bernardino (SC)	2023	MHDT	Aggregate	Aggregate	Gasoline	1442.204503	25938069.73	4958.893297	4958893.297	32182743.24	25938069.73	336402804.8	10.45	MHDT
San Bernardino (SC)	2023	MHDT	Aggregate	Aggregate	Diesel	14412.4861	310464735.1	27223.84994	27223849.94		310464735.1			
San Bernardino (SC)	2023	OBUS	Aggregate	Aggregate	Gasoline	407.9446622	5869505.547	1135.734985	1135734.985	1726785.417	5869505.547	11114833.51	6.44	OBUS
San Bernardino (SC)	2023	OBUS	Aggregate	Aggregate	Diesel	237.5070727	5245327.967	591.0504318	591050.4318		5245327.967			
San Bernardino (SC)	2023	SBUS	Aggregate	Aggregate	Gasoline	244.2336068	3447454.302	379.2108102	379210.8102	1405118.943	3447454.302	11448349.48	8.15	SBUS
San Bernardino (SC)	2023	SBUS	Aggregate	Aggregate	Diesel	770.3600273	8000895.175	1025.908133	1025908.133		8000895.175			
San Bernardino (SC)	2023	UBUS	Aggregate	Aggregate	Gasoline	115.4982144	4295276.435	465.9180273	465918.0273	2873547.899	4295276.435	13573588.55	4.72	UBUS
San Bernardino (SC)	2023	UBUS	Aggregate	Aggregate	Diesel	2.719599852	73154.40181	9.711346482	9711.346482		73154.40181			
San Bernardino (SC)	2023	UBUS	Aggregate	Aggregate	Electricity	0.058469431	409.3068597	0	0		409.3068597			
San Bernardino (SC)	2023	UBUS	Aggregate	Aggregate	Natural Gas	210.689456	9204748.41	2397.918525	2397918.525		9204748.41			

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UPDATED GEOTECHNICAL INVESTIGATION PROPOSED COMMERCIAL/INDUSTRIAL BUILDING

1230 West Durst Drive
Rialto, California
for
BCIF Acquisitions LLC

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

March 31, 2021

BCIF Acquisitions LLC
4675 MacArthur Court, Suite 625
Newport Beach, California 92660

Attention: Mr. Peter F. Schafer
AVP, Development

Project No.: **21G149-1**

Subject: **Updated Geotechnical Investigation**
Proposed Commercial/Industrial Building
1230 West Durst Drive
Rialto, California

Dear Mr. Schafer:

In accordance with your request, we have conducted a geotechnical investigation at the subject site. We are pleased to present this report summarizing the conclusions and recommendations developed from our investigation.

We sincerely appreciate the opportunity to be of service on this project. We look forward to providing additional consulting services during the course of the project. If we may be of further assistance in any manner, please contact our office.

Respectfully Submitted,

SOUTHERN CALIFORNIA GEOTECHNICAL, INC.

Joseph Lozano Leon
Staff Engineer

Robert G. Trazo, GE 2655
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
ROBERT TRAZO
No. 2655
GEOTECHNICAL
STATE OF CALIFORNIA

Distribution: (1) Addressee

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A Plate 1: Site Location Map
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1.0 EXECUTIVE SUMMARY

Presented below is a brief summary of the conclusions and recommendations of this investigation. Since this summary is not all inclusive, it should be read in complete context with the entire report.

Site Preparation

- Demolition should include all foundations, floor slabs, septic systems, utilities and any other subsurface improvements that will not remain in place with the new development. Debris resultant from demolition should be disposed of off-site. Alternatively, concrete and asphalt debris may be pulverized to a maximum 2-inch particle size, well mixed with the on-site soils, and incorporated into new structural fills or it may be crushed and made into crushed miscellaneous base (CMB), if desired.
- Initial site stripping should include removal of the existing vegetation including grass and weeds, as well as any underlying topsoil, and any trees that will not remain with the proposed development. Stripping should also include the removal of any tree root masses. These materials should be disposed of off-site.
- Most of the borings encountered undocumented artificial fill soils, extending to depths of 2½ to 5½± feet. The fill soils are underlain by native alluvium which possesses unfavorable consolidation/collapse characteristics to depths of 4 to 5± feet below the existing site grades. Based on these conditions, remedial grading is considered warranted within the proposed building area in order to remove all of the undocumented fill soils in their entirety, any soils disturbed during demolition and a portion of the near-surface native alluvial soils, and replace these materials as compacted fill soils.
- It is recommended that the proposed building pad area be overexcavated to a depth of at least 4 feet below existing grade and to a depth of at least 3 feet below proposed pad grade. The overexcavation should also extend to a sufficient depth to remove all of the artificial fill materials. Overexcavation within the foundation areas is recommended to extend to a depth of at least 3 feet below proposed foundation bearing grade.
- It should be noted that compressible/collapsible silty sands were encountered at Boring No. B-1, extending to a depth of 9± feet. Deeper removal within this localized area may be required during grading of the proposed building pad.
- After overexcavation has been completed, the subgrade soils should be evaluated by the geotechnical engineer to identify any additional soils that should be overexcavated. The resulting subgrade should then be scarified to a depth of 12 inches, thoroughly moisture conditioned to 0 to 4 percent above optimum, and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. The previously excavated soils may then be replaced as compacted structural fill.
- The new pavement and flatwork subgrade soils are recommended to be scarified to a depth of 12± inches, thoroughly moisture conditioned to 0 to 4 percent above optimum, and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density.
- Based on the results of corrosivity testing, the on-site soils are considered to be corrosive to copper pipe.

Building Foundations

- Conventional shallow foundations, supported in newly placed structural fill soils.
- Maximum, net allowable soil bearing pressure: 2,500 lbs/ft^2.
- Minimum reinforcement consisting of at least two (2) No. 5 rebars (1 top and 1 bottom) in strip footings. Additional reinforcement may be necessary for structural considerations.

Building Floor Slab

- Conventional Slab-on-Grade, minimum 6 inches thick.
- Modulus of Subgrade Reaction: 150 psi/in.
- Reinforcement is not considered necessary, for geotechnical considerations.
- The actual floor slab reinforcement should be determined by the structural engineer, based on the imposed slab loading.

Pavements

ASPHALT PAVEMENTS (R = 40)					
Materials	**Thickness (inches)**				
	Parking Stalls (TI = 4.0)	Auto Drive Lanes (TI = 5.0)	Truck Traffic		
			(TI = 6.0)	(TI = 7.0)	(TI = 8.0)
Asphalt Concrete	3	3	3½	4	5
Aggregate Base	3	4	6	7	8
Compacted Subgrade	12	12	12	12	12

PORTLAND CEMENT CONCRETE PAVEMENTS (R = 40)				
Materials	**Thickness (inches)**			
	Automobile Parking and Drive Areas (TI = 5.0)	Truck Traffic Areas		
		(TI =6.0)	(TI =7.0)	(TI =8.0)
PCC	5	5	5½	6½
Compacted Subgrade (95% minimum compaction)	12	12	12	12

2.0 SCOPE OF SERVICES

The scope of services performed for this project was in accordance with our Proposal No. 21P191 dated March 11, 2021. The scope of services included a visual site reconnaissance and the review of the previously prepared geotechnical report to provide criteria for preparing the design of the building foundations, building floor slab, and parking lot pavements along with site preparation recommendations and construction considerations for the proposed development. The evaluation of the environmental aspects of this site was beyond the scope of services for this geotechnical investigation.

3.0 SITE AND PROJECT DESCRIPTION

3.1 Site Conditions

The subject site is located at the address of 1230 West Durst Drive in Rialto, California. The site is bounded to the north by a railroad easement, to the west by South Cedar Avenue, to the south by West Durst Drive, and to the east by an existing commercial/industrial building. The general location of the site is illustrated on the Site Location Map, enclosed as Plate 1 in Appendix A of this report.

The site consists of three (3) rectangular to irregular-shaped parcels, which total 8.94± acres in size. Based on our site reconnaissance performed on March 17, 2021, the site is currently vacant and developed with remnants of the former Southland Pipe Corporation. The previously existing development consisted of a 10,555± ft² industrial building located in the central region of the site, and two (2) concrete/base crushing facilities located in the east-central region and northeast corner of the site. The crushing facilities included, but were not limited to, canopies, above-ground storage tanks (AST's), concrete pillars, storage enclosures, and conveyor-belt pads. The 10,555± ft² industrial building is still present. This building is of steel frame construction with metal siding, and is assumed to be supported on conventional shallow foundations with a concrete slab-on-grade floor. An 8±-foot-high CMU wall borders the site. The site is also developed with an automobile asphaltic concrete (AC) parking lot in the southwestern region. The existing AC pavements are in poor condition with moderate to severe cracking throughout. Ground surface cover for the remainder of the site consists of exposed soils and aggregate base with isolated Portland cement concrete (PCC) areas. A concrete drain is also present along the southern half of the eastern property line.

Topographic information for the site was obtained from an ALTA plan provided by the client. The plan indicates that generally the overall site topography gently slopes downward to the southeast at a gradient of 2± percent. The elevation at the subject site generally ranges from 1235± feet mean sea level (msl) in the northwestern corner of the site to 1218± feet msl in the southeastern corner.

3.2 Proposed Development

The site plan provided to our office by the client indicates that the new development will consist of a single commercial/industrial building, 203,230± ft^2 in size. The building will be located in the western region of the property. Dock-high doors will be constructed along a portion of the east building wall. The building is expected to be surrounded by AC pavements in the parking and drive areas, PCC pavements in the loading dock area, and concrete flatwork and landscaped planters throughout the site.

Detailed structural information has not been provided. It is assumed that the new building will be a single-story structure of concrete tilt-up construction. Based on the assumed construction,

maximum column and wall loads are expected to be on the order of 100 kips and 4 to 7 kips per linear foot, respectively.

No significant amounts of below-grade construction, such as basements or crawl spaces, are expected to be included in the proposed development. Based on the assumed topography, cuts and fills of 3 to 5± feet are expected to be necessary to achieve the proposed site grades.

4.0 SUBSURFACE EXPLORATION

4.1 Scope of Exploration/Sampling Methods

The subsurface exploration conducted for this project consisted of six (6) borings (identified as Boring Nos. B-1 through B-6) advanced to depths of 20 to 25± feet below the existing site grades. All of the borings were drilled on July 13, 2020, and were logged during drilling by a member of our staff.

The borings were advanced with hollow-stem augers, by a conventional truck-mounted drilling rig. Representative bulk and relatively undisturbed soil samples were taken during drilling. Relatively undisturbed soil samples were taken with a split barrel "California Sampler" containing a series of one inch long, 2.416± inch diameter brass rings. This sampling method is described in ASTM Test Method D-3550. In-situ samples were also taken using a 1.4± inch inside diameter split spoon sampler, in general accordance with ASTM D-1586. Both of these samplers are driven into the ground with successive blows of a 140-pound weight falling 30 inches. The blow counts obtained during driving are recorded for further analysis. Bulk samples were collected in plastic bags to retain their original moisture content. The relatively undisturbed ring samples were placed in molded plastic sleeves that were then sealed and transported to our laboratory.

The approximate locations of the borings are indicated on the Boring Location Plan, included as Plate 2 in Appendix A of this report. The Boring Logs, which illustrate the conditions encountered at the boring locations, as well as the results of some of the laboratory testing, are included in Appendix B.

4.2 Geotechnical Conditions

Pavements

Boring No. B-4 was drilled through the existing AC pavement. The pavement section at this location consists of 1± inch of AC underlain by 6± inches of crushed aggregate base.

Artificial Fill

Artificial fill soils were encountered beneath the existing pavement at Boring No. B-4 and at the ground surface at Boring Nos. B-3, B-5 and B-6, extending to depths of 2½ to 5½± feet below the existing site grades. The fill soils generally consist of medium dense silty sands with varying fine gravel content. No soil samples were recovered at Boring No. B-4 due to the possible presence of an underground utility line. The fill soils possess a disturbed mottled appearance, resulting in their classification as artificial fill.

Alluvium

Native alluvium was encountered beneath the artificial fill soils and at the ground surface at all of the boring locations, extending to at least the maximum depth explored of 25± feet below the existing site grades. The near-surface alluvium generally consists of medium dense to dense gravelly sands, silty sands, and sands with varying fine to coarse gravel content, extending to depths of 5½ to 12± feet. At greater depths and extending to the maximum depth explored of 25± feet, the alluvial soils generally consist of dense to very dense sands, gravelly sands and occasional very dense silty sands. Boring No. B-2 encountered a soil stratum consisting of dense to very dense gravelly sands, extending from the ground surface to a depth of 20± feet.

Groundwater

Free water was not encountered during the drilling of any of the borings. Based on the lack of any water within the borings, and the moisture contents of the recovered soil samples, the static groundwater is considered to have existed at a depth in excess of 25± feet at the time of the subsurface exploration.

As a part of our research, we reviewed available groundwater data in order to determine groundwater levels for the site. Water level data was obtained from the California Department of Water Resources Water Data Library website, https://wdl.water.ca.gov/waterdatalibrary/. The nearest monitoring well on record (identified as State Well Number: 01S05W11F003S) is located 1± mile northeast of the project site. Water level readings within this monitoring well indicate a high groundwater level of 223± feet below the ground surface in May 1999.

5.0 LABORATORY TESTING

The soil samples recovered from the subsurface exploration were returned to our laboratory for further testing to determine selected physical and engineering properties of the soils. The tests are briefly discussed below. It should be noted that the test results are specific to the actual samples tested, and variations could be expected at other locations and depths.

Classification

All recovered soil samples were classified using the Unified Soil Classification System (USCS), in accordance with ASTM D-2488. Field identifications were then supplemented with additional visual classifications and/or by laboratory testing. The USCS classifications are shown on the Boring Logs and are periodically referenced throughout this report.

Density and Moisture Content

The density has been determined for selected relatively undisturbed ring samples. These densities were determined in general accordance with the method presented in ASTM D-2937. The results are recorded as dry unit weight in pounds per cubic foot. The moisture contents are determined in accordance with ASTM D-2216, and are expressed as a percentage of the dry weight. These test results are presented on the Boring Logs.

Consolidation

Selected soil samples have been tested to determine their consolidation potential, in accordance with ASTM D-2435. The testing apparatus is designed to accept either natural or remolded samples in a one-inch high ring, approximately 2.416 inches in diameter. Each sample is then loaded incrementally in a geometric progression and the resulting deflection is recorded at selected time intervals. Porous stones are in contact with the top and bottom of the sample to permit the addition or release of pore water. The samples are typically inundated with water at an intermediate load to determine their potential for collapse or heave. The results of the consolidation testing are plotted on Plates C-1 through C-4 in Appendix C of this report.

Maximum Dry Density and Optimum Moisture Content

A representative bulk sample has been tested for its maximum dry density and optimum moisture content. The results have been obtained using the Modified Proctor procedure, per ASTM D-1557 and are presented on Plate C-5 in Appendix C of this report. This test is generally used to compare the in-situ densities of undisturbed field samples, and for later compaction testing. Additional testing of other soil types or soil mixes may be necessary at a later date.

Soluble Sulfates

A representative sample of the near-surface soil was submitted to a subcontracted analytical laboratory for determination of soluble sulfate content. Soluble sulfates are naturally present in soils, and if the concentration is high enough, can result in degradation of concrete which comes

into contact with these soils. The results of the soluble sulfate testing are presented below, and are discussed further in a subsequent section of this report.

Sample Identification	Soluble Sulfates (%)	Sulfate Classification
B-6 @ 0 to 5 feet	0.006	Not Applicable (S0)

Corrosivity Testing

One representative bulk sample of the near-surface soils was submitted to a subcontracted corrosion engineering laboratory to identify potentially corrosive characteristics with respect to common construction materials. The corrosivity testing included a determination of the electrical resistivity, pH, and chloride and nitrate concentrations of the soils, as well as other tests. The results of some of these tests are presented below.

Sample Identification	Saturated Resistivity (ohm-cm)	pH	Chlorides (mg/kg)	Nitrates (mg/kg)
B-6 @ 0 to 5 feet	3,720	7.6	5.8	84

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our review, field exploration, laboratory testing and geotechnical analysis, the proposed development is considered feasible from a geotechnical standpoint. The recommendations contained in this report should be taken into the design, construction, and grading considerations.

The recommendations are contingent upon all grading and foundation construction activities being monitored by the geotechnical engineer of record. The recommendations are provided with the assumption that an adequate program of client consultation, construction monitoring, and testing will be performed during the final design and construction phases to verify compliance with these recommendations. Maintaining Southern California Geotechnical, Inc., (SCG) as the geotechnical consultant from the beginning to the end of the project will provide continuity of services. The geotechnical engineering firm providing testing and observation services shall assume the responsibility of Geotechnical Engineer of Record.

The Grading Guide Specifications, included as Appendix D, should be considered part of this report, and should be incorporated into the project specifications. The contractor and/or owner of the development should bring to the attention of the geotechnical engineer any conditions that differ from those stated in this report, or which may be detrimental for the development.

6.1 Seismic Design Considerations

The subject site is located in an area which is subject to strong ground motions due to earthquakes. The performance of a site specific seismic hazards analysis was beyond the scope of this investigation. However, numerous faults capable of producing significant ground motions are located near the subject site. Due to economic considerations, it is not generally considered reasonable to design a structure that is not susceptible to earthquake damage. Therefore, significant damage to structures may be unavoidable during large earthquakes. The proposed structure should, however, be designed to resist structural collapse and thereby provide reasonable protection from serious injury, catastrophic property damage and loss of life.

Faulting and Seismicity

Research of available maps indicates that the subject site is not located within an Alquist-Priolo Earthquake Fault Zone. Furthermore, SCG did not identify any evidence of faulting during the geotechnical investigation. Therefore, the possibility of significant fault rupture on the site is considered to be low.

The potential for other geologic hazards such as seismically induced settlement, lateral spreading, tsunamis, inundation, seiches, flooding, and subsidence affecting the site is considered low.

Seismic Design Parameters

The 2019 California Building Code (CBC) provides procedures for earthquake resistant structural design that include considerations for on-site soil conditions, occupancy, and the configuration of the structure including the structural system and height. The seismic design parameters presented below are based on the soil profile and the proximity of known faults with respect to the subject site.

Based on standards in place at the time of this report, the proposed development is expected to be designed in accordance with the requirements of the 2019 edition of the California Building Code (CBC), which was adopted on January 1, 2020.

The 2019 CBC Seismic Design Parameters have been generated using the SEAOC/OSHPD Seismic Design Maps Tool, a web-based software application available at the website www.seismicmaps.org. This software application calculates seismic design parameters in accordance with several building code reference documents, including ASCE 7-16, upon which the 2019 CBC is based. The application utilizes a database of risk-targeted maximum considered earthquake (MCE_R) site accelerations at 0.01-degree intervals for each of the code documents. The table below was created using data obtained from the application. The output generated from this program is included as Plate E-1 in Appendix E of this report.

The 2019 CBC requires that a site-specific ground motion study be performed in accordance with Section 11.4.8 of ASCE 7-16 for Site Class D sites with a mapped S_1 value greater than 0.2. However, Section 11.4.8 of ASCE 7-16 also indicates an exception to the requirement for a site-specific ground motion hazard analysis for certain structures on Site Class D sites. The commentary for Section 11 of ASCE 7-16 (Page 534 of Section C11 of ASCE 7-16) indicates that "In general, this exception effectively limits the requirements for site-specific hazard analysis to very tall and or flexible structures at Site Class D sites." **Based on our understanding of the proposed development, the seismic design parameters presented below were calculated assuming that the exception in Section 11.4.8 applies to the proposed structure at this site. However, the structural engineer should verify that this exception is applicable to the proposed structure.** Based on the exception, the spectral response accelerations presented below were calculated using the site coefficients (F_a and F_v) from Tables 1613.2.3(1) and 1613.2.3(2) presented in Section 16.4.4 of the 2019 CBC.

2019 CBC SEISMIC DESIGN PARAMETERS

Parameter		Value
Mapped Spectral Acceleration at 0.2 sec Period	S_S	1.786
Mapped Spectral Acceleration at 1.0 sec Period	S_1	0.700
Site Class	---	D
Site Modified Spectral Acceleration at 0.2 sec Period	S_{MS}	1.786
Site Modified Spectral Acceleration at 1.0 sec Period	S_{M1}	1.190
Design Spectral Acceleration at 0.2 sec Period	S_{DS}	1.190
Design Spectral Acceleration at 1.0 sec Period	S_{D1}	0.793

It should be noted that the site coefficient F_v and the parameters S_{M1} and S_{D1} were not included in the SEAOC/OSHPD Seismic Design Maps Tool output for the 2019 CBC. We calculated these parameters-based on Table 1613.2.3(2) in Section 16.4.4 of the 2019 CBC using the value of S_1 obtained from the Seismic Design Maps Tool, assuming that a site-specific ground motion hazards analysis is not required for the proposed building at this site.

Liquefaction

Liquefaction is the loss of strength in generally cohesionless, saturated soils when the pore-water pressure induced in the soil by a seismic event becomes equal to or exceeds the overburden pressure. The primary factors which influence the potential for liquefaction include groundwater table elevation, soil type and grain size characteristics, relative density of the soil, initial confining pressure, and intensity and duration of ground shaking. The depth within which the occurrence of liquefaction may impact surface improvements is generally identified as the upper 50 feet below the existing ground surface. Liquefaction potential is greater in saturated, loose, poorly graded fine sands with a mean (d_{50}) grain size in the range of 0.075 to 0.2 mm (Seed and Idriss, 1971). Clayey (cohesive) soils or soils which possess clay particles (d<0.005mm) in excess of 20 percent (Seed and Idriss, 1982) are generally not considered to be susceptible to liquefaction, nor are those soils which are above the historic static groundwater table.

The California Geological Survey (CGS) has not yet conducted detailed seismic hazards mapping in the area of the subject site. The general liquefaction susceptibility of the site was determined by research of the San Bernardino County Land Use Plan, General Plan, Geologic Hazard Overlays. Map FH29 for the Fontana 7.5-Minute Quadrangle indicates that the subject site is not located within an area of liquefaction susceptibility. Based on the mapping performed by the county of San Bernardino and the lack of a historic high ground water table within the upper 50± feet of the ground surface, liquefaction is not considered to be a design concern for this project.

6.2 Geotechnical Design Considerations

General

Most of the borings encountered artificial fill materials, extending to depths of 2½ to 5½± feet below the existing site grades. Based on a lack of documentation regarding the placement and compaction of the existing fill materials, these soils are considered to consist of undocumented fill, and are not suitable for the support of the foundation loads of the proposed building. The fill soils are underlain by native alluvium which possesses unfavorable consolidation/collapse characteristics to depths of 4 to 5± feet below the existing site grades. Additionally, it is anticipated that demolition of the existing structures and associated improvements will cause disturbance of the upper 3 to 5± feet of soil. Therefore, remedial grading is considered warranted within the proposed building area in order to remove all of the undocumented fill soils in their entirety, the upper portion of the near-surface native alluvial soils, and any soils disturbed during the demolition process, and replace these materials as compacted structural fill soils. It should be noted that compressible/collapsible silty sands were encountered at Boring No. B-1, extending to a depth of 9± feet. Deeper removal within this localized area may be required during grading of the proposed building pad.

Settlement

The recommended remedial grading will remove the existing undocumented fill soils and a portion of the native alluvial soils and replace these materials as compacted structural fill. The native soils that will remain in place below the recommended depth of overexcavation will not be subject to large stress increases from the foundations of the new structure. Therefore, following completion of the recommended grading, post-construction settlements are expected to be within tolerable limits.

Expansion

The near-surface soils consist of sands and silty sands with no appreciable clay content. These materials have been visually classified as non-expansive. Therefore, no design considerations related to expansive soils are considered warranted for this site.

Soluble Sulfates

The results of the soluble sulfate testing indicate that the selected sample of the on-site soils contains a sulfate concentration that corresponds to Class S0 with respect to the American Concrete Institute (ACI) Publication 318-05 Building Code Requirements for Structural Concrete and Commentary, Section 4.3. Therefore, specialized concrete mix designs are not considered to be necessary, with regard to sulfate protection purposes. It is, however, recommended that additional soluble sulfate testing be conducted at the completion of rough grading to verify the soluble sulfate concentrations of the soils which are present at pad grade within the building areas.

Corrosion Potential

The results of laboratory testing indicate that the tested sample of the on-site soils possesses a saturated resistivity value of 3,720 ohm-cm, and a pH value of 7.6. These test results have been evaluated in accordance with guidelines published by the Ductile Iron Pipe Research Association (DIPRA). The DIPRA guidelines consist of a point system by which characteristics of the soils are used to quantify the corrosivity characteristics of the site. Resistivity and pH are two of the five factors that enter into the evaluation procedure. Redox potential, relative soil moisture content and sulfides are also included. Although sulfide testing was not part of the scope of services for this project, we have evaluated the corrosivity characteristics of the on-site soils using resistivity, pH and moisture content. Based on these factors, and utilizing the DIPRA procedure, the on-site soils are not considered to be corrosive to ductile iron pipe. Therefore, polyethylene protection is not expected to be required for cast iron or ductile iron pipes. However, SCG does not practice in the area of corrosion engineering. Therefore, the client may also wish to contact a corrosion engineer to provide a more thorough evaluation.

A relatively low concentration (5.8 mg/kg) of chlorides was detected in the sample submitted for corrosivity testing. In general, soils possessing chloride concentrations in excess of 500 parts per million (ppm) are considered to be corrosive with respect to steel reinforcement within reinforced concrete. Based on the lack of any significant chlorides in the tested sample, the site is considered to have a C1 chloride exposure in accordance with the American Concrete Institute (ACI) Publication 318 Building Code Requirements for Structural Concrete and Commentary. Therefore,

a specialized concrete mix design for reinforced concrete for protection against chloride exposure is not considered warranted.

Nitrates

Nitrates present in soil can be corrosive to copper tubing at concentrations greater than 50 mg/kg. The tested sample possesses a nitrate concentration of 84 mg/kg. **Based on this test result, the on-site soils are considered to be corrosive to copper pipe.** Since SCG does not practice in the area of corrosion engineering, we recommend that the client contact a corrosion engineer to provide recommendations for the protection of copper tubing/pipe in contact with the on-site soils.

Shrinkage/Subsidence

Removal and recompaction of the existing fill soils and near-surface alluvium is estimated to result in an average shrinkage of 5 to 15 percent. However, potential shrinkage for individual samples ranged locally between 2 and 17 percent. The potential shrinkage estimate is based on dry density testing performed on small-diameter samples taken at the boring locations. If a more accurate and precise shrinkage estimate is desired, SCG can perform a shrinkage study involving several excavated test-pits where in-place densities are determined using in-situ testing methods instead of laboratory density testing on small-diameter samples. Please contact SCG for details and a cost estimate regarding a shrinkage study, if desired.

Minor ground subsidence is expected to occur in the soils below the zone of removal, due to settlement and machinery working. The subsidence is estimated to be 0.1 feet.

These estimates are based on previous experience and the subsurface conditions encountered at the boring locations. The actual amount of subsidence is expected to be variable and will be dependent on the type of machinery used, repetitions of use, and dynamic effects, all of which are difficult to assess precisely.

Grading and Foundation Plan Review

Grading and foundation plans were not available at the time of this report. It is therefore recommended that we be provided with copies of the preliminary grading and foundation plans, when they become available, for review with regard to the conclusions, recommendations, and assumptions contained within this report.

6.3 Site Grading Recommendations

The grading recommendations presented below are based on the subsurface conditions encountered at the boring locations and our understanding of the proposed development. We recommend that all grading activities be completed in accordance with the Grading Guide Specifications included as Appendix D of this report, unless superseded by site-specific recommendations presented below.

Site Stripping and Demolition

Demolition of the existing structures, concrete pads, and asphalt pavements will be necessary in order to facilitate the construction of the proposed development. Demolition should include all foundations, floor slabs, utilities and any other subsurface improvements that will not remain in place with the new development. Based on our experience with nearby projects, septic systems may be present in the areas of the existing structures. Any septic systems, including the associated leach fields encountered during demolition and/or grading should be removed in their entirety. If deeper seepage pits are encountered, our office should be contacted for additional recommendations. Debris resultant from demolition should be disposed of off-site. Alternatively, concrete and asphalt debris may be pulverized to a maximum 2-inch particle size, well mixed with the on-site soils, and incorporated into new structural fills or it may be crushed and made into crushed miscellaneous base (CMB), if desired.

Initial site stripping should also include removal of any surficial vegetation from the unpaved areas of the site. This should include any weeds, grasses, shrubs, and trees. Root systems associated with the trees should be removed in their entirety, and the resultant excavations should be backfilled with compacted structural fill soils. The actual extent of site stripping should be determined in the field by the geotechnical engineer, based on the organic content and stability of the materials encountered.

Treatment of Existing Soils: Building Pad

Remedial grading should be performed within the proposed building area in order to remove the existing undocumented fill soils, any soils disturbed during demolition, and the near-surface compressible/collapsible native alluvium. Undocumented fill soils were encountered at most of the boring locations extending to depths of 2½ to 5½± feet below the existing site grades. Based on conditions encountered at the boring locations, the existing soils within the proposed building area is recommended to be overexcavated to a depth of at least 4 feet below existing grade and to a depth of at least 3 feet below proposed building pad subgrade elevation, whichever is greater. Within the influence zones of the new foundations, the overexcavation should extend to a depth of at least 3 feet below proposed foundation bearing grade. It should be noted that compressible/collapsible silty sands were encountered at Boring No. B-1, extending to a depth of 9± feet. Deeper removal within this localized area may be required during grading of the proposed building pad.

The overexcavation areas should extend at least 5 feet beyond the building and foundation perimeters, and to an extent equal to the depth of fill placed below the foundation bearing grade, whichever is greater. If the proposed structure incorporates any exterior columns (such as for a canopy or overhang) the area of overexcavation should also encompass these areas.

Following completion of the overexcavation, the subgrade soils within the building area should be evaluated by the geotechnical engineer to verify their suitability to serve as the structural fill subgrade, as well as to support the foundation loads of the new structure. This evaluation should include proofrolling and probing to identify any soft, loose or otherwise unstable soils that must be removed. **Some localized areas of deeper excavation may be required if additional fill materials or loose, porous, or low density native soils are encountered at the base of the overexcavation**.

After a suitable overexcavation subgrade has been achieved, the exposed soils should be scarified to a depth of at least 12 inches and moisture treated to 0 to 4 percent above optimum moisture content. The subgrade soils should then be recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. The building pad areas may then be raised to grade with previously excavated soils or imported structural fill.

Treatment of Existing Soils: Retaining Walls and Site Walls

The existing soils within the areas of any proposed retaining walls and site walls should be overexcavated to a depth of 3 feet below foundation bearing grade and replaced as compacted structural fill as discussed above for the proposed building pad. Any undocumented fill soils or disturbed native alluvium within any of these foundation areas should be removed in their entirety. The overexcavation areas should extend at least 5 feet beyond the foundation perimeters, and to an extent equal to the depth of fill below the new foundations. Any erection pads for tilt-up concrete walls are considered to be part of the foundation system. Therefore, these overexcavation recommendations are applicable to erection pads. The overexcavation subgrade soils should be evaluated by the geotechnical engineer prior to scarifying, moisture conditioning to within 0 to 4 percent above the optimum moisture content, and recompacting the upper 12 inches of exposed subgrade soils. The previously excavated soils may then be replaced as compacted structural fill.

If the full lateral recommended remedial grading cannot be completed for the proposed retaining walls and site walls located along property lines, the foundations for those walls should be designed using a reduced allowable bearing pressure. Furthermore, the contractor should take necessary precautions to protect the adjacent structures during rough grading. Specialized grading techniques, such as A-B-C slot cuts, will likely be required during remedial grading. The geotechnical engineer of record should be contacted if additional recommendations, such as shoring design recommendations, are required during grading.

Treatment of Existing Soils: Flatwork, Parking and Drive Areas

Based on economic considerations, overexcavation of the existing near-surface existing soils in the new flatwork, parking and drive areas is not considered warranted, with the exception of areas where lower strength or unstable soils are identified by the geotechnical engineer during grading. Subgrade preparation in the new flatwork, parking and drive areas should initially consist of removal of all soils disturbed during stripping and demolition operations.

The geotechnical engineer should then evaluate the subgrade to identify any areas of additional unsuitable soils. Any such materials should be removed to a level of firm and unyielding soil. The exposed subgrade soils should then be scarified to a depth of 12± inches, moisture conditioned to 0 to 4 percent above the optimum moisture content, and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. Based on the presence of variable strength surficial soils throughout the site, it is expected that some isolated areas of additional overexcavation may be required to remove zones of lower strength, unsuitable soils.

The grading recommendations presented above for the proposed flatwork, parking and drive areas assume that the owner and/or developer can tolerate minor amounts of settlement within these areas. The grading recommendations presented above do not mitigate the extent of

undocumented fill or compressible/collapsible native alluvium in the flatwork, parking and drive areas. As such, some settlement and associated pavement distress could occur. Typically, repair of such distressed areas involves significantly lower costs than completely mitigating these soils at the time of construction. If the owner cannot tolerate the risk of such settlements, the flatwork, parking and drive areas should be overexcavated to a depth of 2 feet below proposed pavement subgrade elevation, with the resulting soils replaced as compacted structural fill.

Fill Placement

- Fill soils should be placed in thin (6± inches), near-horizontal lifts, moisture conditioned to 0 to 4 percent above the optimum moisture content, and compacted.
- On-site soils may be used for fill provided they are cleaned of any debris to the satisfaction of the geotechnical engineer.
- All grading and fill placement activities should be completed in accordance with the requirements of the 2019 CBC and the grading code of the city of Rialto.
- All fill soils should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density.
- Compaction tests should be performed periodically by the geotechnical engineer as random verification of compaction and moisture content. These tests are intended to aid the contractor. Since the tests are taken at discrete locations and depths, they may not be indicative of the entire fill and therefore should not relieve the contractor of his responsibility to meet the job specifications.

Imported Structural Fill

All imported structural fill should consist of very low expansive (EI < 20), well graded soils possessing at least 10 percent fines (that portion of the sample passing the No. 200 sieve). Additional specifications for structural fill are presented in the Grading Guide Specifications, included as Appendix D.

Utility Trench Backfill

In general, all utility trench backfill soils should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density. It is recommended that materials in excess of 3 inches in size not be used for utility trench backfill. Compacted trench backfill should conform to the requirements of the local grading code, and more restrictive requirements may be indicated by the city of Rialto. All utility trench backfills should be witnessed by the geotechnical engineer. The trench backfill soils should be compaction tested where possible; probed and visually evaluated elsewhere.

Utility trenches which parallel a footing, and extending below a 1h:1v plane projected from the outside edge of the footing should be backfilled with structural fill soils, compacted to at least 90 percent of the ASTM D-1557 standard. Pea gravel backfill should not be used for these trenches.

6.4 Construction Considerations

Excavation Considerations

The near-surface soils are predominately granular in nature. These materials will likely be subject to caving within shallow excavations. Where caving occurs within shallow excavations, flattened excavation slopes may be sufficient to provide excavation stability. On a preliminary basis, the inclination of temporary slopes should not exceed 2h:1v. Deeper excavations may require some form of external stabilization such as shoring or bracing. Maintaining adequate moisture content within the near-surface soils will improve excavation stability. All excavation activities on this site should be conducted in accordance with Cal-OSHA regulations.

Moisture Sensitive Subgrade Soils

Some of the near-surface soils possess appreciable silt content. These soils may become unstable if exposed to significant moisture infiltration or disturbance by construction traffic. In addition, based on their granular content, some of the on-site soils will also be susceptible to erosion. The site should, therefore, be graded to prevent ponding of surface water and to prevent water from running into excavations.

Groundwater

The static groundwater table at this site is considered to exist at a depth of more than 25± feet. Therefore, groundwater is not expected to impact the grading or foundation construction activities.

6.5 Foundation Design and Construction

Based on the preceding grading recommendations, it is assumed that the new building pad will be underlain by structural fill soils used to replace existing undocumented fill soils and the upper-portion of the alluvium. These new structural fill soils are expected to extend to depths of at least 3 feet below proposed foundation bearing grade, underlain by 1± foot of additional soil that has been densified and moisture conditioned in place. Based on this subsurface profile, the proposed structure may be supported on conventional shallow foundations.

Foundation Design Parameters

New square and rectangular footings may be designed as follows:

- Maximum, net allowable soil bearing pressure: 2,500 lbs/ft^2.
- Maximum, net allowable soil bearing pressure: 1,500 lbs/ft^2 if the full recommended lateral extent of remedial grading cannot be achieved.
- Minimum wall/column footing width: 14 inches/24 inches.

- Minimum longitudinal steel reinforcement within strip footings: Two (2) No. 5 rebars (1 top and 1 bottom).

- Minimum foundation embedment: 12 inches into suitable structural fill soils, and at least 18 inches below adjacent exterior grade. Interior column footings may be placed immediately beneath the floor slab.

- It is recommended that the perimeter building foundations be continuous across all exterior doorways. Any flatwork adjacent to the exterior doors should be doweled into the perimeter foundations in a manner determined by the structural engineer.

The allowable bearing pressures presented above may be increased by 1/3 when considering short duration wind or seismic loads. The minimum steel reinforcement recommended above is based on standard geotechnical practice. The actual design of the foundations should be determined by the structural engineer.

Foundation Construction

The foundation subgrade soils should be evaluated at the time of overexcavation, as discussed in Section 6.3 of this report. It is further recommended that the foundation subgrade soils be evaluated by the geotechnical engineer immediately prior to steel or concrete placement. Soils suitable for direct foundation support should consist of newly placed structural fill, compacted to at least 90 percent of the ASTM D-1557 maximum dry density. Any unsuitable materials should be removed to a depth of suitable bearing compacted structural fill or suitable native alluvium (where reduced bearing pressures are utilized), with the resulting excavations backfilled with compacted fill soils. As an alternative, lean concrete slurry (500 to 1,500 psi) may be used to backfill such isolated overexcavations.

The foundation subgrade soils should also be properly moisture conditioned to 0 to 4 percent above the Modified Proctor optimum, to a depth of at least 12 inches below bearing grade. Since it is typically not feasible to increase the moisture content of the floor slab and foundation subgrade soils once rough grading has been completed, care should be taken to maintain the moisture content of the building pad subgrade soils throughout the construction process.

Estimated Foundation Settlements

Post-construction total and differential settlements of shallow foundations designed and constructed in accordance with the previously presented recommendations are estimated to be less than 1.0 and 0.5 inches, respectively. Differential movements are expected to occur over a 30-foot span, thereby resulting in an angular distortion of less than 0.002 inches per inch.

Lateral Load Resistance

Lateral load resistance will be developed by a combination of friction acting at the base of foundations and slabs and the passive earth pressure developed by footings below grade. The following friction and passive pressure may be used to resist lateral forces:

- Passive Earth Pressure: 300 lbs/ft^3

- Friction Coefficient: 0.30

These are allowable values, and include a factor of safety. When combining friction and passive resistance, the passive pressure component should be reduced by one-third. These values assume that footings will be poured directly against compacted structural fill. The maximum allowable passive pressure is 3,000 lbs/ft^2.

6.6 Floor Slab Design and Construction

Subgrades which will support the new floor slab should be prepared in accordance with the recommendations contained in the ***Site Grading Recommendations*** section of this report. Based on the anticipated grading which will occur at this site, the floor of the new structure may be constructed as a conventional slab-on-grade supported on newly placed structural fill soils. These fill soils are expected to extend to a depth of at least 3 feet below finished pad grade. Based on geotechnical considerations, the floor slab may be designed as follows:

- Minimum slab thickness: 6 inches.

- Modulus of Subgrade Reaction: k = 150 psi/in.

- Minimum slab reinforcement: Reinforcement is not considered necessary from a geotechnical standpoint. The actual floor slab reinforcement should be determined by the structural engineer, based on the imposed slab loading.

- Slab underlayment: If moisture sensitive floor coverings will be used then minimum slab underlayment should consist of a moisture vapor barrier constructed below the entire area of the proposed slab where such moisture sensitive floor coverings are anticipated. The moisture vapor barrier should meet or exceed the Class A rating as defined by ASTM E 1745-97 and have a permeance rating less than 0.01 perms as described in ASTM E 96-95 and ASTM E 154-88. A polyolefin material such as Stego® Wrap Vapor Barrier or equivalent will meet these specifications. The moisture vapor barrier should be properly constructed in accordance with all applicable manufacturer specifications. Given that a rock free subgrade is anticipated and that a capillary break is not required, sand below the barrier is not required. The need for sand and/or the amount of sand above the moisture vapor barrier should be specified by the structural engineer or concrete contractor. The selection of sand above the barrier is not a geotechnical engineering issue and hence outside our purview. Where moisture sensitive floor coverings are not anticipated, the vapor barrier may be eliminated.

- Moisture condition the floor slab subgrade soils to 0 to 4 percent above the Modified Proctor optimum moisture content, to a depth of 12 inches. The moisture content of the floor slab subgrade soils should be verified by the geotechnical engineer within 24 hours prior to concrete placement.

- Proper concrete curing techniques should be utilized to reduce the potential for slab curling or the formation of excessive shrinkage cracks.

The actual design of the floor slab should be completed by the structural engineer to verify adequate thickness and reinforcement.

6.7 Retaining Wall Design and Construction

Although not indicated on the site plans, some small (less than 6 feet in height) retaining walls may be required to facilitate the new site grades. The parameters recommended for use in the design of these walls are presented below.

Retaining Wall Design Parameters

Based on the soil conditions encountered at the boring locations, the following parameters may be used in the design of new retaining walls for this site. We have provided parameters assuming the use of on-site soils for retaining wall backfill. The on-site soils generally consist of silty sands and sands. Based on their classification, these materials are expected to possess a friction angle of at least 30 degrees when compacted to at least 90 percent of the ASTM D-1557 maximum dry density.

If desired, SCG could provide design parameters for an alternative select backfill material behind the retaining walls. The use of select backfill material could result in lower lateral earth pressures. In order to use the design parameters for the imported select fill, this material must be placed within the entire active failure wedge. This wedge is defined as extending from the heel of the retaining wall upwards at an angle of approximately 60° from horizontal. If select backfill material behind the retaining wall is desired, SCG should be contacted for supplementary recommendations.

RETAINING WALL DESIGN PARAMETERS

Design Parameter		Soil Type
		On-site Sands and Silty Sands
Internal Friction Angle (ϕ)		30°
Unit Weight		136 lbs/ft^3
Equivalent Fluid Pressure:	Active Condition (level backfill)	45 lbs/ft^3
	Active Condition (2h:1v backfill)	73 lbs/ft^3
	At-Rest Condition (level backfill)	68 lbs/ft^3

The walls should be designed using a soil-footing coefficient of friction of 0.30 and an equivalent passive pressure of 300 lbs/ft^3. The structural engineer should incorporate appropriate factors of safety in the design of the retaining walls.

The active earth pressure may be used for the design of retaining walls that do not directly support structures or support soils that in turn support structures and which will be allowed to

deflect. The at-rest earth pressure should be used for walls that will not be allowed to deflect such as those which will support foundation bearing soils, or which will support foundation loads directly.

Where the soils on the toe side of the retaining wall are not covered by a "hard" surface such as a structure or pavement, the upper 1 foot of soil should be neglected when calculating passive resistance due to the potential for the material to become disturbed or degraded during the life of the structure.

Retaining Wall Foundation Design

The retaining wall foundations should be supported within newly placed compacted structural fill, extending to a depth of at least 3 feet below the proposed bearing grade. Foundations to support new retaining walls should be designed in accordance with the general Foundation Design Parameters presented in a previous section of this report.

Seismic Lateral Earth Pressures

In accordance with the 2019 CBC, any retaining walls more than 6 feet in height must be designed for seismic lateral earth pressures. If walls 6 feet or more are required for this site, the geotechnical engineer should be contacted for supplementary seismic lateral earth pressure recommendations.

Backfill Material

On-site soils may be used to backfill the retaining walls. However, all backfill material placed within 3 feet of the back wall face should have a particle size no greater than 3 inches. Some sorting and/or crushing operations may be required. The retaining wall backfill materials should be well graded.

It is recommended that a minimum 1-foot thick layer of free-draining granular material (less than 5 percent passing the No. 200 sieve) be placed against the face of the retaining walls. This material should extend from the top of the retaining wall footing to within 1 foot of the ground surface on the back side of the retaining wall. This material should be approved by the geotechnical engineer. In lieu of the 1-foot thick layer of free-draining material, a properly installed prefabricated drainage composite such as the MiraDRAIN 6000XL (or approved equivalent), which is specifically designed for use behind retaining walls, may be used. If the layer of free-draining material is not covered by an impermeable surface, such as a structure or pavement, a 12-inch thick layer of a low permeability soil should be placed over the backfill to reduce surface water migration to the underlying soils. The layer of free draining granular material should be separated from the backfill soils by a suitable geotextile, approved by the geotechnical engineer.

All retaining wall backfill should be placed and compacted under engineering controlled conditions in the necessary layer thicknesses to ensure an in-place density between 90 and 93 percent of the maximum dry density as determined by the Modified Proctor test (ASTM D1557-91). Care should be taken to avoid over-compaction of the soils behind the retaining walls, and the use of heavy compaction equipment should be avoided.

Subsurface Drainage

As previously indicated, the retaining wall design parameters are based upon drained backfill conditions. Consequently, some form of permanent drainage system will be necessary in conjunction with the appropriate backfill material. Subsurface drainage may consist of either:

- A weep hole drainage system typically consisting of a series of 4-inch diameter holes in the wall situated slightly above the ground surface elevation on the exposed side of the wall and at an approximate 8-foot on-center spacing. The weep holes should include a 2 cubic foot pocket of open graded gravel, surrounded by an approved geotextile fabric, at each weep hole location.

- A 4-inch diameter perforated pipe surrounded by 2 cubic feet of gravel per linear foot of drain placed behind the wall, above the retaining wall footing. The gravel layer should be wrapped in a suitable geotextile fabric to reduce the potential for migration of fines. The footing drain should be extended to daylight or tied into a storm drainage system.

6.8 Pavement Design Parameters

Site preparation in the pavement area should be completed as previously recommended in the ***Site Grading Recommendations*** section of this report. The subsequent pavement recommendations assume proper drainage and construction monitoring, and are based on either PCA or CALTRANS design parameters for a twenty (20) year design period. However, these designs also assume a routine pavement maintenance program to obtain the anticipated 20-year pavement service life.

Pavement Subgrades

It is anticipated that the new pavements will be primarily supported on a layer of compacted structural fill, consisting of scarified, thoroughly moisture conditioned and recompacted existing soils. The near-surface soils generally consist of sands and silty sands. These soils are generally considered to possess good to excellent pavement support characteristics, with R-values in the range of 40 to 60. The subsequent pavement design is therefore based upon an assumed R-value of 40. Any fill material imported to the site should have support characteristics equal to or greater than that of the on-site soils and be placed and compacted under engineering controlled conditions. It is recommended that R-value testing be performed after completion of rough grading to verify that the pavement design recommendations presented herein are valid.

Asphaltic Concrete

Presented below are the recommended thicknesses for new flexible pavement structures consisting of asphaltic concrete over a granular base. The pavement designs are based on the traffic indices (TI's) indicated. The client and/or civil engineer should verify that these TI's are representative of the anticipated traffic volumes. If the client and/or civil engineer determine that the expected traffic volume will exceed the applicable traffic index, we should be contacted for supplementary recommendations. The design traffic indices equate to the following approximate daily traffic volumes over a 20-year design life, assuming six operational traffic days per week.

Traffic Index	No. of Heavy Trucks per Day
4.0	0
5.0	1
6.0	3
7.0	11
8.0	35

For the purpose of the traffic volumes indicated above, a truck is defined as a 5-axle tractor trailer unit with one 8-kip axle and two 32-kip tandem axles. All of the traffic indices allow for 1,000 automobiles per day.

ASPHALT PAVEMENTS (R = 40)					
Materials	**Thickness (inches)**				
	Parking Stalls (TI = 4.0)	Auto Drive Lanes (TI = 5.0)	Truck Traffic		
			(TI = 6.0)	(TI = 7.0)	(TI = 8.0)
Asphalt Concrete	3	3	3½	4	5
Aggregate Base	3	4	6	7	8
Compacted Subgrade	12	12	12	12	12

The aggregate base course should be compacted to at least 95 percent of the ASTM D-1557 maximum dry density. The asphaltic concrete should be compacted to at least 95 percent of the batch plant-reported maximum density. The aggregate base course may consist of crushed aggregate base (CAB) or crushed miscellaneous base (CMB), which is a recycled gravel, asphalt and concrete material. The gradation, R-Value, Sand Equivalent, and Percentage Wear of the CAB or CMB should comply with appropriate specifications contained in the current edition of the "Greenbook" Standard Specifications for Public Works Construction.

Portland Cement Concrete

The preparation of the subgrade soils within concrete pavement areas should be performed as previously described for proposed asphalt pavement areas. The minimum recommended thicknesses for the Portland Cement Concrete pavement sections are as follows:

PORTLAND CEMENT CONCRETE PAVEMENTS (R = 40)				
Materials	**Thickness (inches)**			
	Automobile Parking and Drive Areas (TI = 5.0)	Truck Traffic Areas		
		(TI =6.0)	(TI =7.0)	(TI =8.0)
PCC	5	5	5½	6½
Compacted Subgrade (95% minimum compaction)	12	12	12	12

The concrete should have a 28-day compressive strength of at least 3,000 psi. The maximum joint spacing within all of the PCC pavements is recommended to be equal to or less than 30 times the pavement thickness. Any reinforcement within the PCC pavements should be determined by the project structural engineer.

7.0 GENERAL COMMENTS

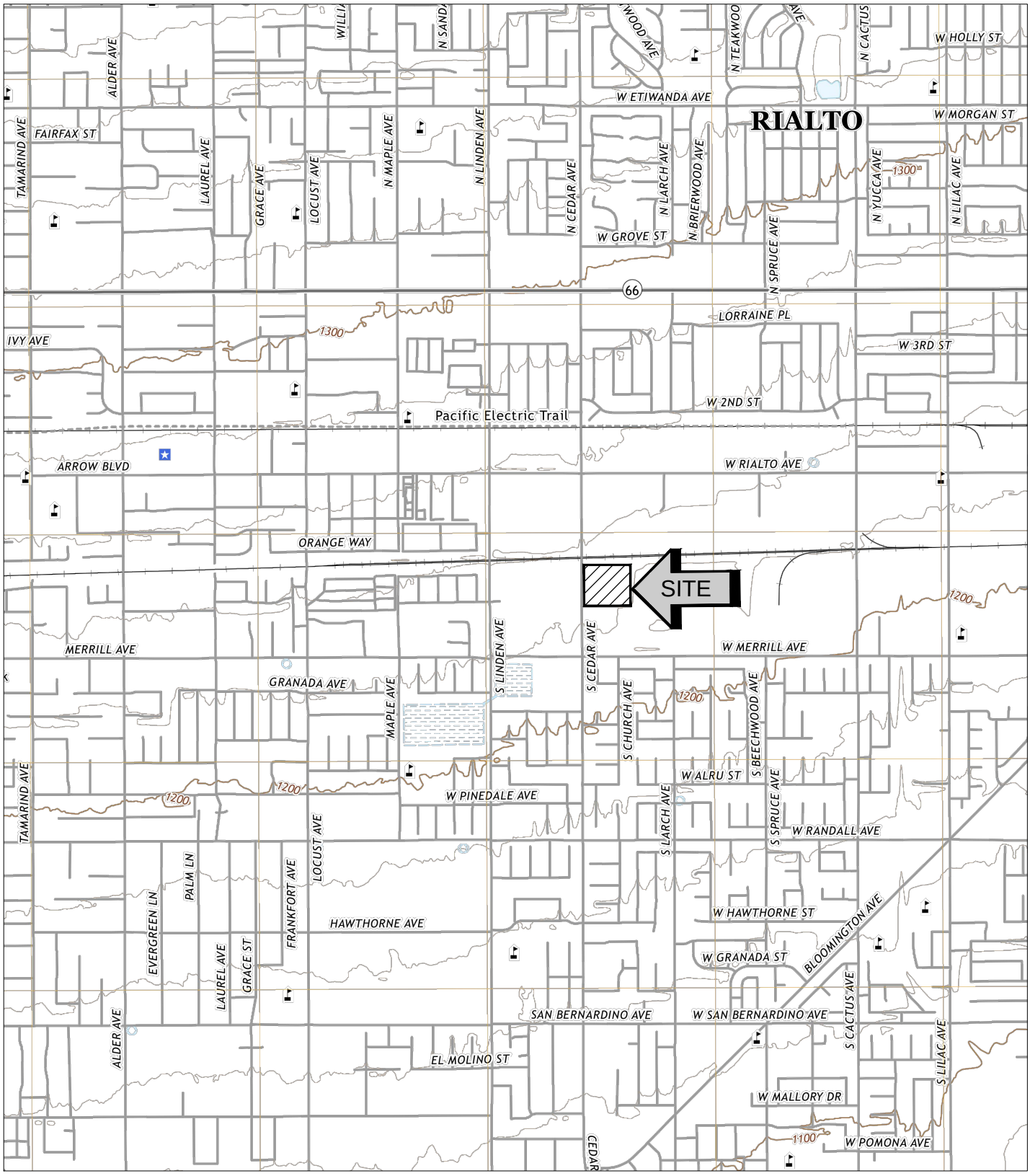
This report has been prepared as an instrument of service for use by the client, in order to aid in the evaluation of this property and to assist the architects and engineers in the design and preparation of the project plans and specifications. This report may be provided to the contractor(s) and other design consultants to disclose information relative to the project. However, this report is not intended to be utilized as a specification in and of itself, without appropriate interpretation by the project architect, civil engineer, and/or structural engineer. The reproduction and distribution of this report must be authorized by the client and Southern California Geotechnical, Inc. Furthermore, any reliance on this report by an unauthorized third party is at such party's sole risk, and we accept no responsibility for damage or loss which may occur. The client(s)' reliance upon this report is subject to the Engineering Services Agreement, incorporated into our proposal for this project.

The analysis of this site was based on a subsurface profile interpolated from limited discrete soil samples. While the materials encountered in the project area are considered to be representative of the total area, some variations should be expected between boring locations and sample depths. If the conditions encountered during construction vary significantly from those detailed herein, we should be contacted immediately to determine if the conditions alter the recommendations contained herein.

This report has been based on assumed or provided characteristics of the proposed development. It is recommended that the owner, client, architect, structural engineer, and civil engineer carefully review these assumptions to ensure that they are consistent with the characteristics of the proposed development. If discrepancies exist, they should be brought to our attention to verify that they do not affect the conclusions and recommendations contained herein. We also recommend that the project plans and specifications be submitted to our office for review to verify that our recommendations have been correctly interpreted.

The analysis, conclusions, and recommendations contained within this report have been promulgated in accordance with generally accepted professional geotechnical engineering practice. No other warranty is implied or expressed.

APPENDIX A



SOURCE: USGS TOPOGRAPHIC MAP OF THE FONTANA QUADRANGLE, SAN BERNARDINO COUNTY, CALIFORNIA, 2018.

SITE LOCATION MAP

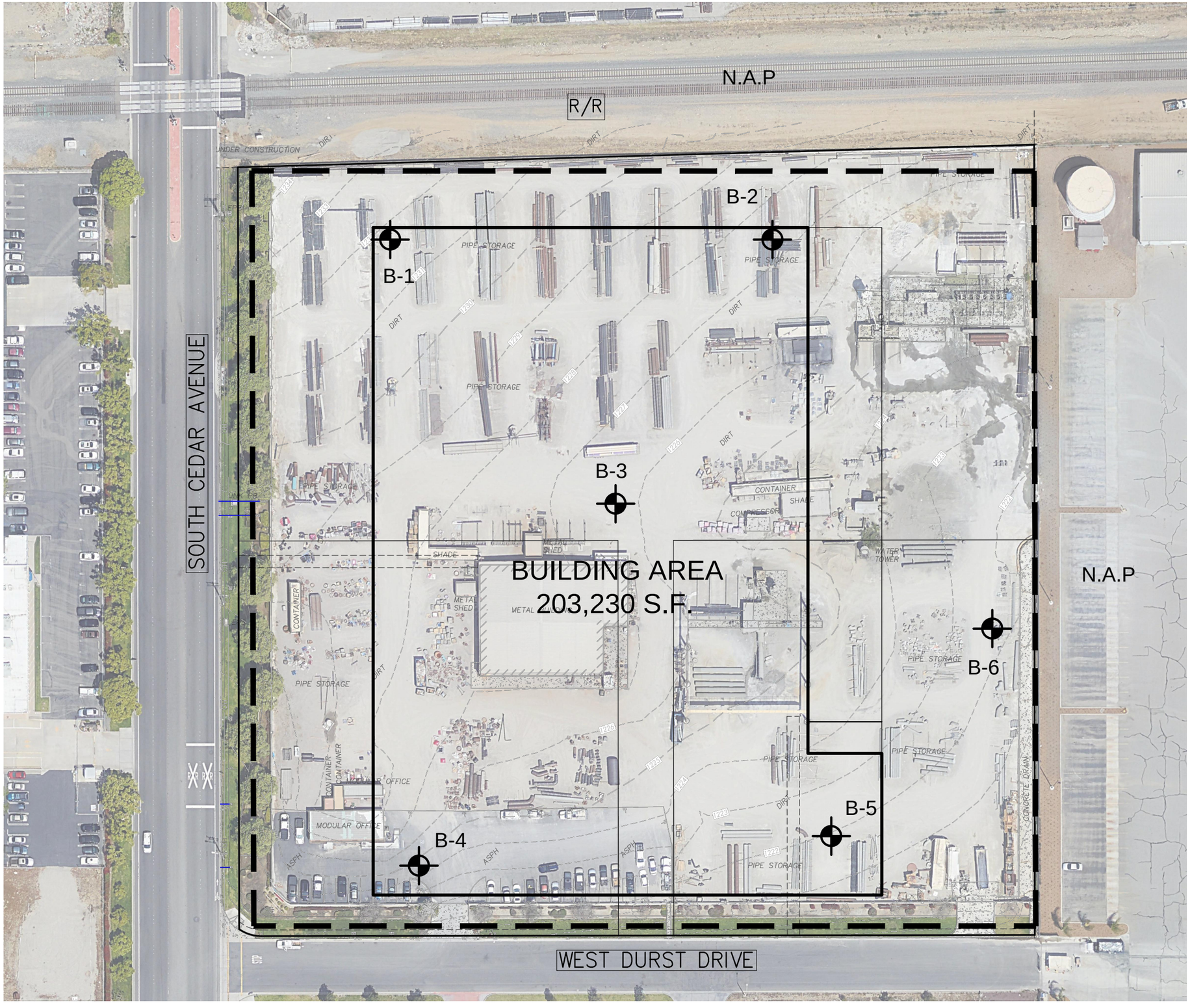
PROPOSED COMMERCIAL/INDUSTRIAL BUILDING

RIALTO, CALIFORNIA

SCALE: 1" = 2000'	
DRAWN: JLL CHKD: RGT	
SCG PROJECT 21G149-1	
PLATE 1	

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



NORTH

SoCalGeo

GEOTECHNICAL LEGEND

APPROXIMATE BORING LOCATION
(SCG PROJECT NO. 20G174-1)

NOTE: BASE MAP PREPARED BY HPA, INC.
AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH.
TOPOGRAPHIC INFORMATION PROVIDED BY THE CLIENT.

BORING LOCATION PLAN

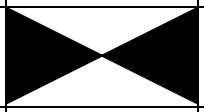
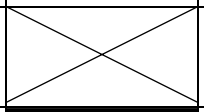
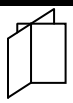
PROPOSED COMMERCIAL/INDUSTRIAL BUILDING
RIALTO, CALIFORNIA

SCALE: 1" = 80'	
DRAWN: JLL CHKD: RGT	
SCG PROJECT 21G149-1	
PLATE 2	

SOUTHERN CALIFORNIA GEOTECHNICAL

APPENDIX B

BORING LOG LEGEND

SAMPLE TYPE	GRAPHICAL SYMBOL	SAMPLE DESCRIPTION
AUGER		SAMPLE COLLECTED FROM AUGER CUTTINGS, NO FIELD MEASUREMENT OF SOIL STRENGTH. (DISTURBED)
CORE		ROCK CORE SAMPLE: TYPICALLY TAKEN WITH A DIAMOND-TIPPED CORE BARREL. TYPICALLY USED ONLY IN HIGHLY CONSOLIDATED BEDROCK.
GRAB		SOIL SAMPLE TAKEN WITH NO SPECIALIZED EQUIPMENT, SUCH AS FROM A STOCKPILE OR THE GROUND SURFACE. (DISTURBED)
CS		CALIFORNIA SAMPLER: 2-1/2 INCH I.D. SPLIT BARREL SAMPLER, LINED WITH 1-INCH HIGH BRASS RINGS. DRIVEN WITH SPT HAMMER. (RELATIVELY UNDISTURBED)
NSR		NO RECOVERY: THE SAMPLING ATTEMPT DID NOT RESULT IN RECOVERY OF ANY SIGNIFICANT SOIL OR ROCK MATERIAL.
SPT		STANDARD PENETRATION TEST: SAMPLER IS A 1.4 INCH INSIDE DIAMETER SPLIT BARREL, DRIVEN 18 INCHES WITH THE SPT HAMMER. (DISTURBED)
SH		SHELBY TUBE: TAKEN WITH A THIN WALL SAMPLE TUBE, PUSHED INTO THE SOIL AND THEN EXTRACTED. (UNDISTURBED)
VANE		VANE SHEAR TEST: SOIL STRENGTH OBTAINED USING A 4 BLADED SHEAR DEVICE. TYPICALLY USED IN SOFT CLAYS-NO SAMPLE RECOVERED.

COLUMN DESCRIPTIONS

DEPTH: Distance in feet below the ground surface.

SAMPLE: Sample Type as depicted above.

BLOW COUNT: Number of blows required to advance the sampler 12 inches using a 140 lb hammer with a 30-inch drop. 50/3" indicates penetration refusal (>50 blows) at 3 inches. WH indicates that the weight of the hammer was sufficient to push the sampler 6 inches or more.

POCKET PEN.: Approximate shear strength of a cohesive soil sample as measured by pocket penetrometer.

GRAPHIC LOG: Graphic Soil Symbol as depicted on the following page.

DRY DENSITY: Dry density of an undisturbed or relatively undisturbed sample in lbs/ft^3.

MOISTURE CONTENT: Moisture content of a soil sample, expressed as a percentage of the dry weight.

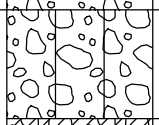
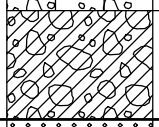
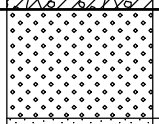
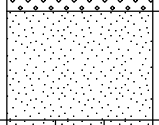
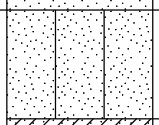
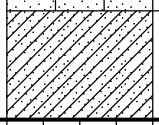
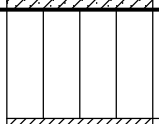
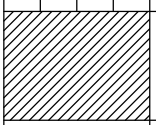
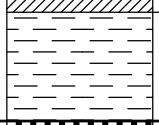
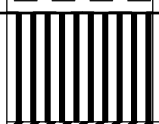
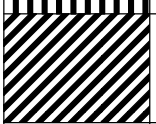
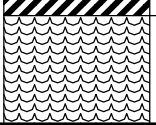
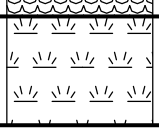
LIQUID LIMIT: The moisture content above which a soil behaves as a liquid.

PLASTIC LIMIT: The moisture content above which a soil behaves as a plastic.

PASSING #200 SIEVE: The percentage of the sample finer than the #200 standard sieve.

UNCONFINED SHEAR: The shear strength of a cohesive soil sample, as measured in the unconfined state.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-1

JOB NO.: 20G174-1
PROJECT: Proposed C/I Building
LOCATION: Rialto, California

DRILLING DATE: 7/13/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jose Zuniga

WATER DEPTH: Dry
CAVE DEPTH: 20 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		28			ALLUVIUM: Brown Silty fine Sand, trace medium Sand, trace fine to coarse Gravel, micaceous, medium dense-damp	112	4					
		19			Brown Silty fine to coarse Sand, trace fine to coarse Gravel, medium dense-dry to damp	122	3					
5		28			Brown fine to coarse Sand, trace to little fine to coarse Gravel, medium dense-damp	117	3					
		19			Brown Silty fine to coarse Sand, trace fine Gravel, medium dense-damp	117	5					
		20				118	6					
10												
		63			Light Gray Brown Gravelly fine to coarse Sand, trace Silt, very dense-damp		3					
15												
		59					2					
20												
		81					2					
25					Boring Terminated at 25 feet							

TBL 20G174-1.GPJ SOCALGEO.GDT 3/31/21

TEST BORING LOG

PLATE B-1

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-2

JOB NO.: 20G174-1
PROJECT: Proposed C/I Building
LOCATION: Rialto, California

DRILLING DATE: 7/13/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jose Zuniga

WATER DEPTH: Dry
CAVE DEPTH: 16 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
0					ALLUVIUM: Light Gray Brown Gravelly fine to coarse Sand, little Silt, dense to very dense-dry to damp							
		33					1					
		36					2					
5												
		61										No Sample Recovery
		36					4					
10												
		54					3					
15												
		60			@ 18½ feet, little to some coarse Gravel		3					
20					Boring Terminated at 20 feet							

TBL 20G174-1.GPJ SOCALGEO.GDT 3/31/21

TEST BORING LOG

PLATE B-2

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-3

JOB NO.: 20G174-1
PROJECT: Proposed C/I Building
LOCATION: Rialto, California

DRILLING DATE: 7/13/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jose Zuniga

WATER DEPTH: Dry
CAVE DEPTH: 20 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		25			FILL: Brown Silty fine Sand, trace medium to coarse Sand, trace fine Gravel, medium dense-damp	114	5					
		21			ALLUVIUM: Brown fine to medium Sand, trace coarse Sand, trace fine Gravel, trace Silt, medium dense-damp	116	3					
5		41			Brown Gravelly fine to coarse Sand, trace Silt, medium dense-damp	118	3					
		46			@ 7 to 15 feet, trace Iron oxide staining, dense	118	4					
		61				113	5					
10												
		37					3					
15												
		73			@ 18½ feet, very dense		3					
20					Boring Terminated at 20 feet							

TBL 20G174-1.GPJ SOCALGEO.GDT 3/31/21

TEST BORING LOG

PLATE B-3

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-4

JOB NO.: 20G174-1
PROJECT: Proposed C/I Building
LOCATION: Rialto, California

DRILLING DATE: 7/13/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jose Zuniga

WATER DEPTH: Dry
CAVE DEPTH: 16 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
					1± inch Asphaltic concrete, 6± inches Aggregate Base							
					FILL: Light Brown Gravelly fine to coarse Sand, little silt, damp							No Sample Recovery @ 0 to 5 feet, due to possible utility
5												
		47			ALLUVIUM: Light Gray Brown Gravelly fine to coarse Sand, dense to very dense-damp		3					
		50					3					
10												
		37					4					
15												
					Brown Silty fine Sand, trace medium to coarse Sand, very dense-damp							
		78					7					
20					Boring Terminated at 20 feet							

TBL 20G174-1.GPJ SOCALGEO.GDT 3/31/21

TEST BORING LOG **PLATE B-4**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-5

JOB NO.: 20G174-1
PROJECT: Proposed C/I Building
LOCATION: Rialto, California

DRILLING DATE: 7/13/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jose Zuniga

WATER DEPTH: Dry
CAVE DEPTH: 20 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		13			FILL: Brown Silty fine Sand, trace fine Gravel, medium dense-damp	117	7					
		23			ALLUVIUM: Brown fine to coarse Sand, trace Silt, little fine to coarse Gravel, medium dense-dry to damp	116	2					
5		50/5"			Brown Silty fine to coarse Sand, little fine to coarse Gravel, dense-damp	111	4					
		40			Gray Brown Gravelly fine to coarse Sand, medium dense to dense-damp	121	3					
10		62				127	3					
15		33				121	4					
		54			@ 18½ to 25 feet, trace to little Silt, very dense		3					
20												
		75					2					
25					Boring Terminated at 25 feet							

TBL 20G174-1.GPJ SOCALGEO.GDT 3/31/21

TEST BORING LOG

PLATE B-5

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-6

JOB NO.: 20G174-1
PROJECT: Proposed C/I Building
LOCATION: Rialto, California

DRILLING DATE: 7/13/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jose Zuniga

WATER DEPTH: Dry
CAVE DEPTH: 14 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		40			FILL: Brown Silty fine to coarse Sand, trace fine Gravel, dense-dry to damp		2					
		36			ALLUVIUM: Brown Silty fine to coarse Sand, trace fine Gravel, dense-dry to damp		2					
5		24			Brown fine to coarse Sand, little fine to coarse Gravel, trace Silt, medium dense-dry to damp		2					
		45			@ 8½ to 20 feet, dense to very dense		2					
10												
		63					2					
15												
		61					2					
20					Boring Terminated at 20 feet							

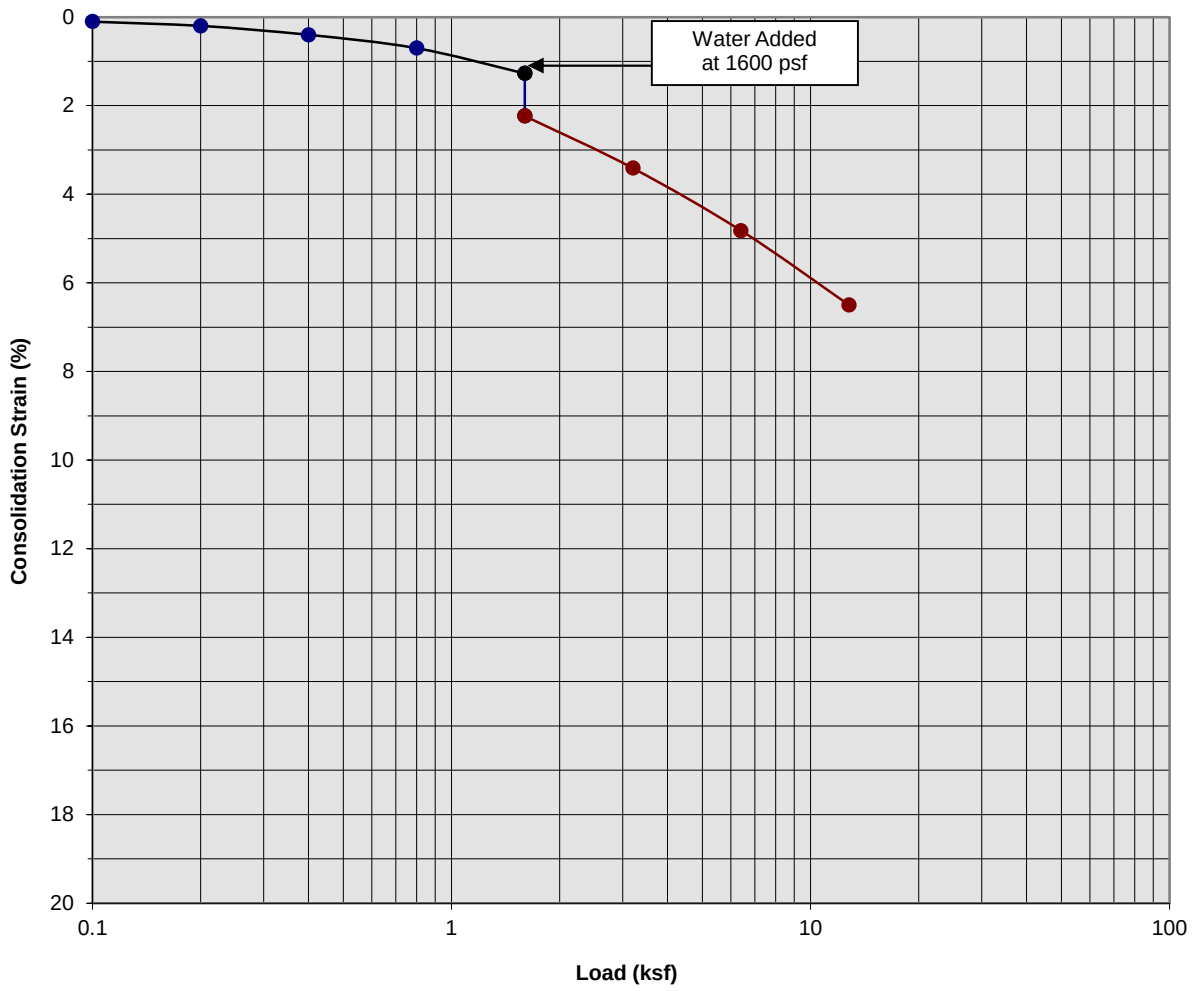
TBL 20G174-1.GPJ SOCALGEO.GDT 3/31/21

TEST BORING LOG

PLATE B-6

APPENDIX C

Consolidation/Collapse Test Results



Classification: Brown Silty fine to coarse Sand, trace fine to coarse Gravel

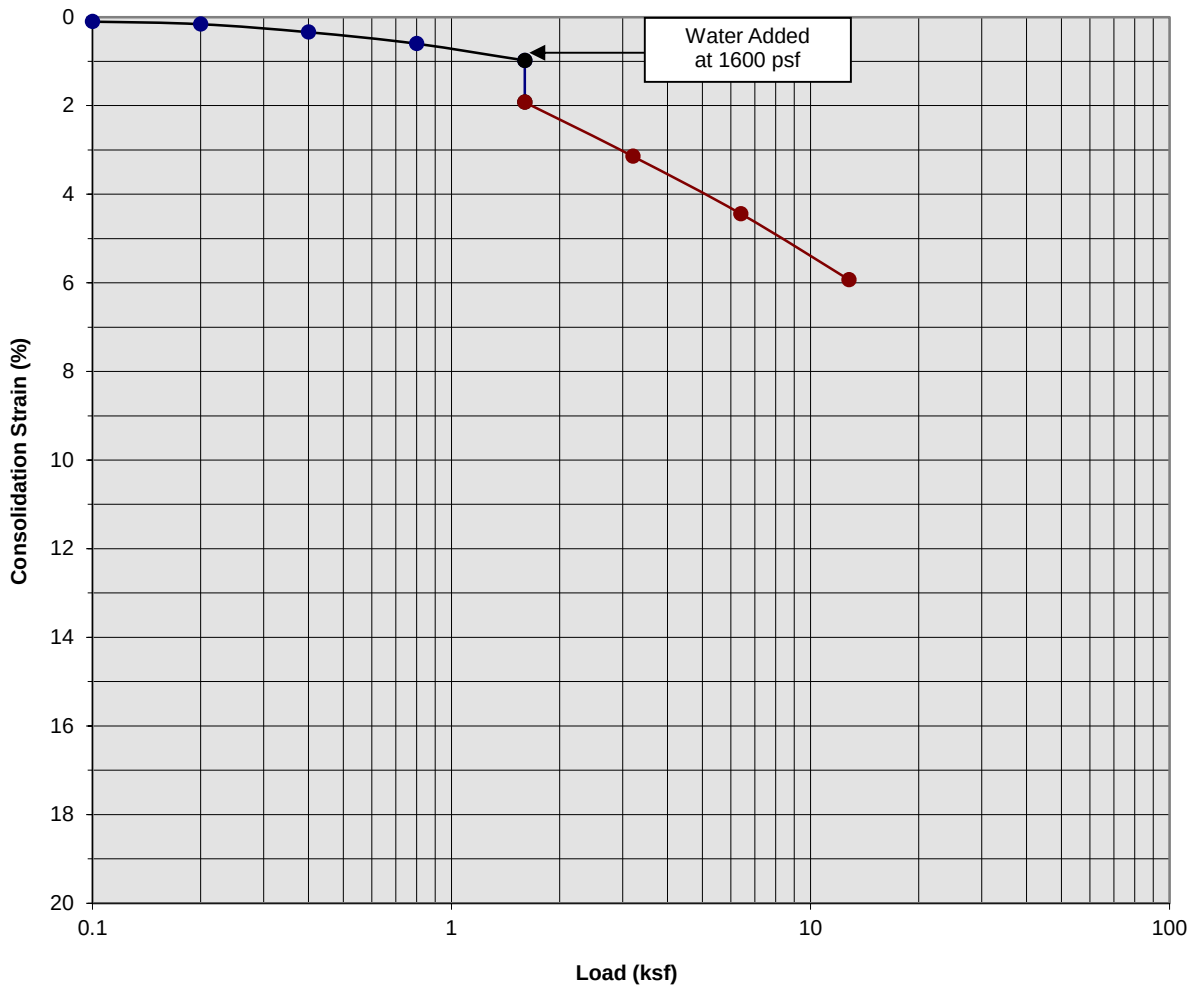
Boring Number:	B-1	Initial Moisture Content (%)	4
Sample Number:	---	Final Moisture Content (%)	11
Depth (ft)	3 to 4	Initial Dry Density (pcf)	121.5
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	128.7
Specimen Thickness (in)	1.0	Percent Collapse (%)	0.96

Proposed Commercial/Industrial Building
Rialto, California
Project No. 20G174-1

PLATE C- 1

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown fine to coarse Sand, trace to little fine to coarse Gravel

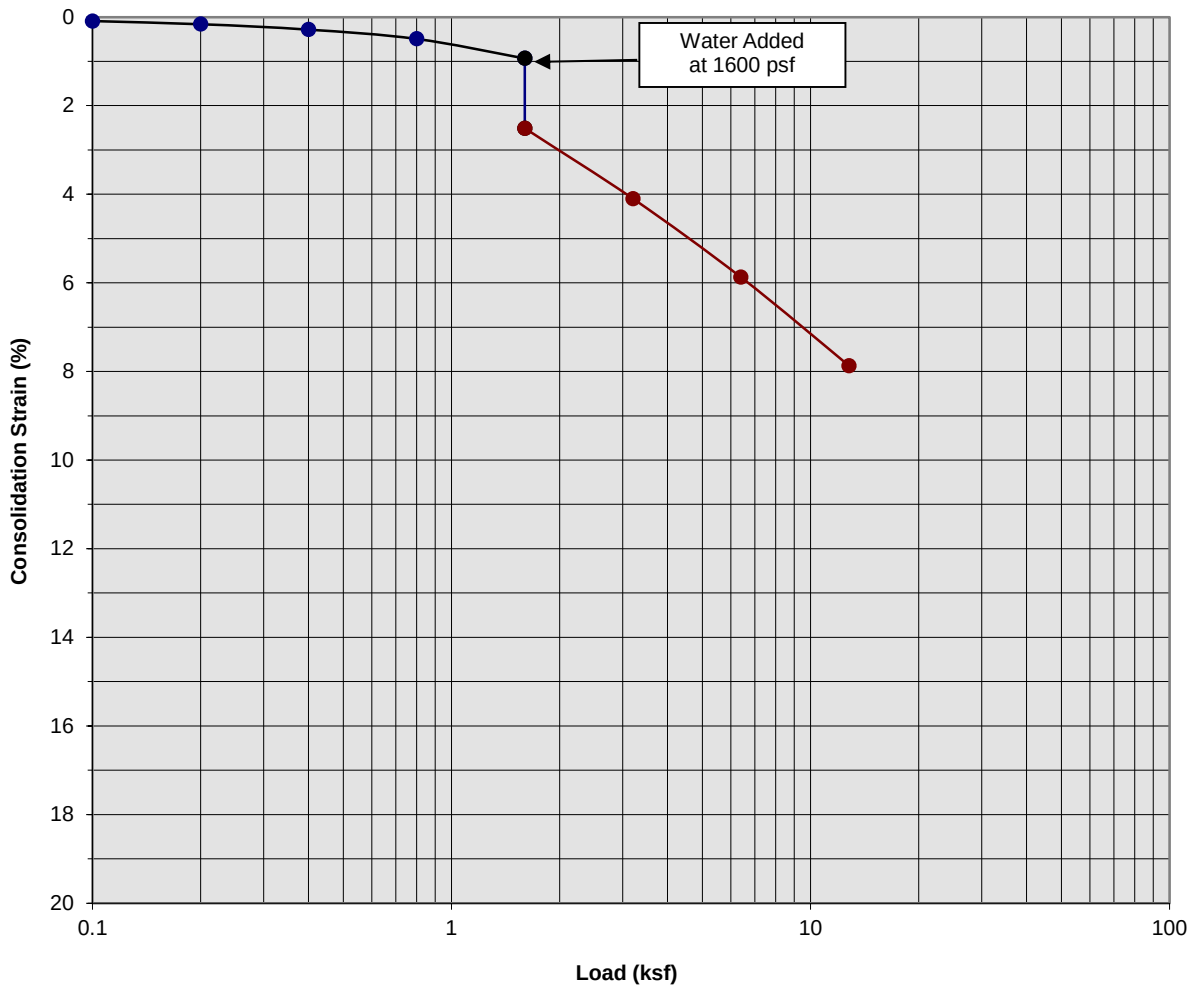
Boring Number:	B-1	Initial Moisture Content (%)	3
Sample Number:	---	Final Moisture Content (%)	11
Depth (ft)	5 to 6	Initial Dry Density (pcf)	117.9
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	124.9
Specimen Thickness (in)	1.0	Percent Collapse (%)	0.94

Proposed Commercial/Industrial Building
Rialto, California
Project No. 20G174-1

PLATE C- 2

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown Silty fine to coarse Sand, trace fine Gravel

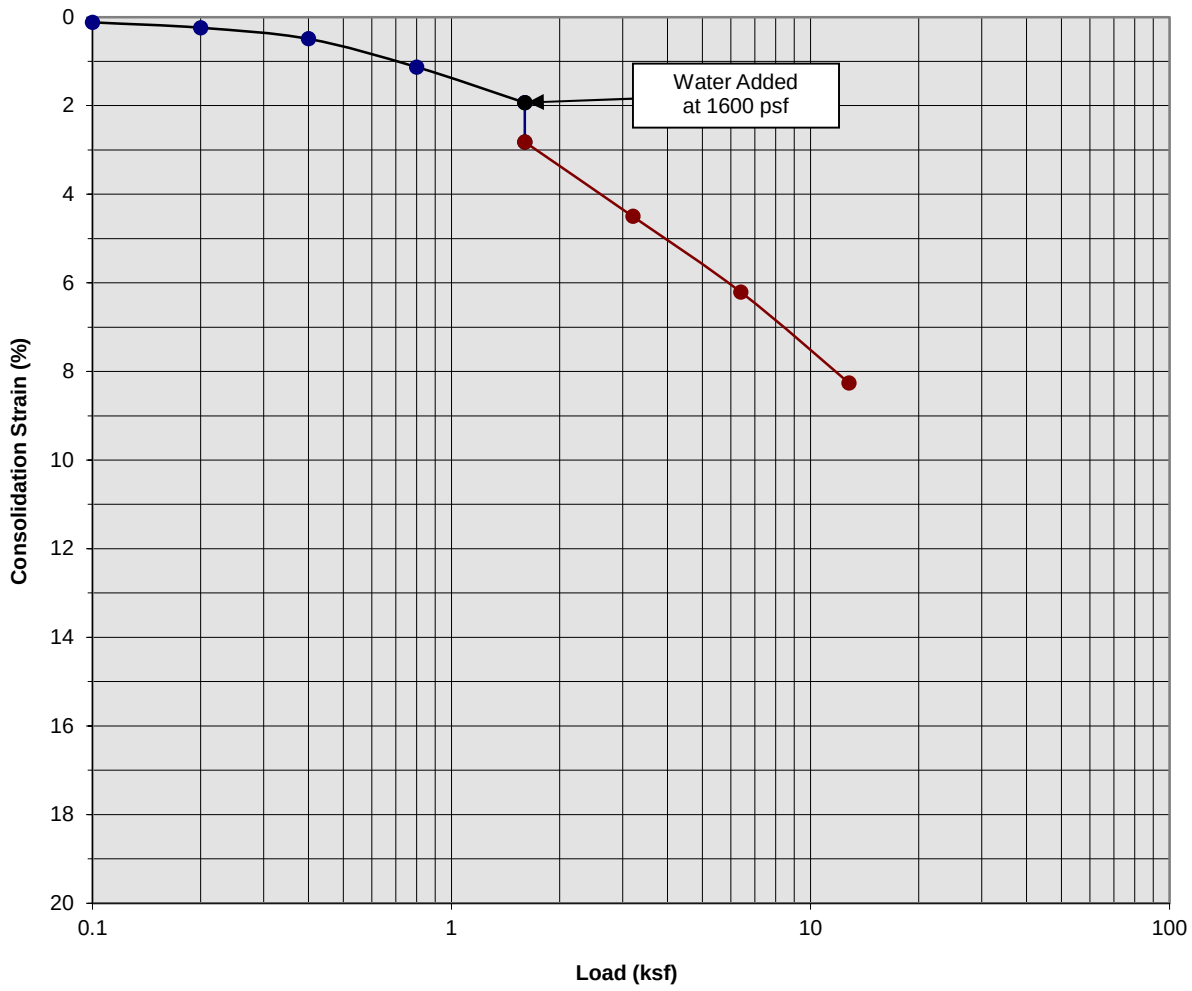
Boring Number:	B-1	Initial Moisture Content (%)	5
Sample Number:	---	Final Moisture Content (%)	11
Depth (ft)	7 to 8	Initial Dry Density (pcf)	117.8
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	127.2
Specimen Thickness (in)	1.0	Percent Collapse (%)	1.58

Proposed Commercial/Industrial Building
Rialto, California
Project No. 20G174-1

PLATE C- 3

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown Silty fine to coarse Sand, trace fine Gravel

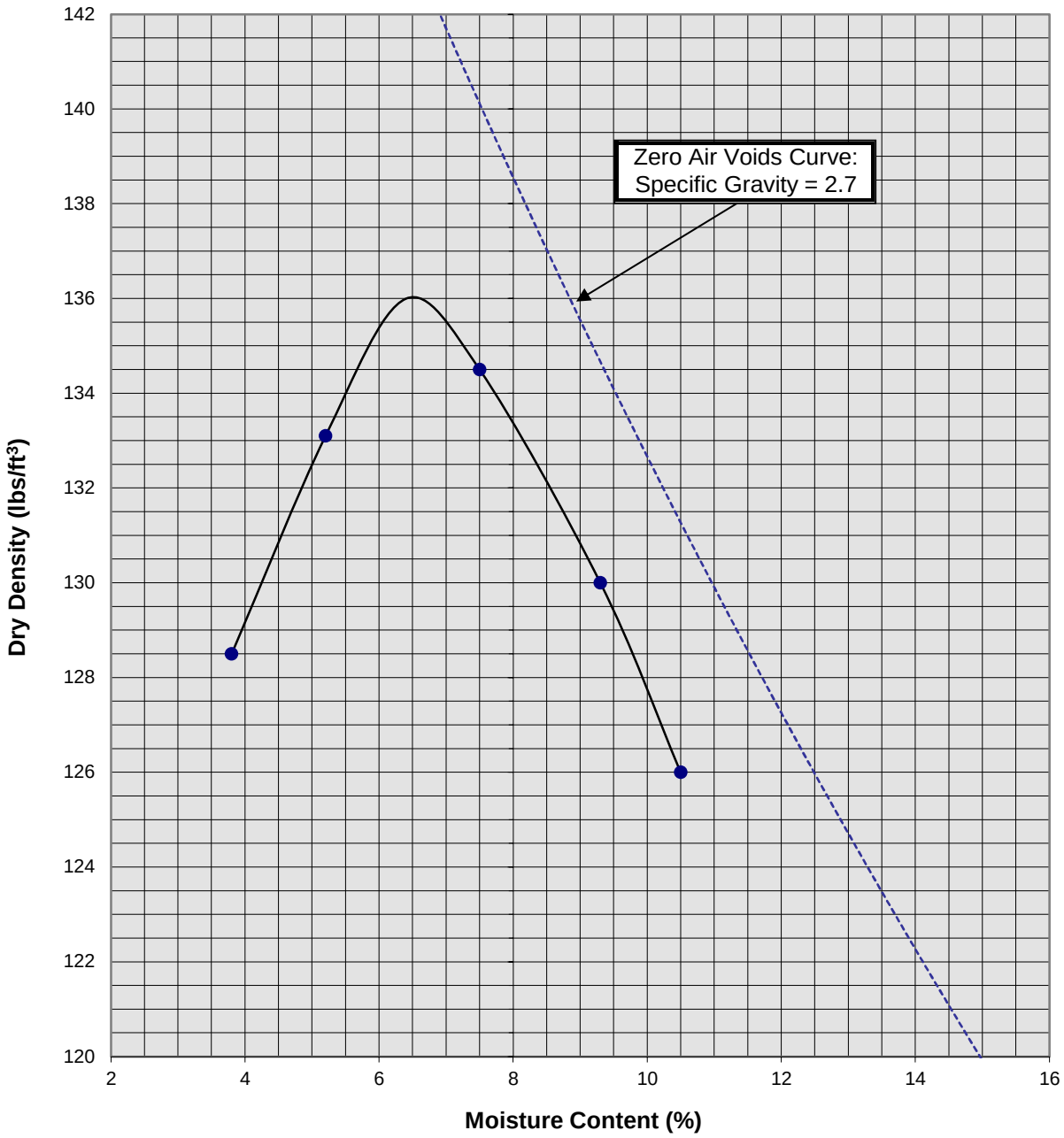
Boring Number:	B-1	Initial Moisture Content (%)	5
Sample Number:	---	Final Moisture Content (%)	11
Depth (ft)	9 to 10	Initial Dry Density (pcf)	117.4
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	127.3
Specimen Thickness (in)	1.0	Percent Collapse (%)	0.89

Proposed Commercial/Industrial Building
Rialto, California
Project No. 20G174-1

PLATE C- 4

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Moisture/Density Relationship
ASTM D-1557



Soil ID Number	B-6 @ 0-5'
Optimum Moisture (%)	6.5
Maximum Dry Density (pcf)	136
Soil Classification	Brown Silty fine to coarse Sand, trace fine Gravel

Proposed Commercial/Industrial Building
Rialto, California
Project No. 20G174-1

PLATE C-5

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

APPENDIX D

GRADING GUIDE SPECIFICATIONS

These grading guide specifications are intended to provide typical procedures for grading operations. They are intended to supplement the recommendations contained in the geotechnical investigation report for this project. Should the recommendations in the geotechnical investigation report conflict with the grading guide specifications, the more site specific recommendations in the geotechnical investigation report will govern.

General

- The Earthwork Contractor is responsible for the satisfactory completion of all earthwork in accordance with the plans and geotechnical reports, and in accordance with city, county, and applicable building codes.

- The Geotechnical Engineer is the representative of the Owner/Builder for the purpose of implementing the report recommendations and guidelines. These duties are not intended to relieve the Earthwork Contractor of any responsibility to perform in a workman-like manner, nor is the Geotechnical Engineer to direct the grading equipment or personnel employed by the Contractor.

- The Earthwork Contractor is required to notify the Geotechnical Engineer of the anticipated work and schedule so that testing and inspections can be provided. If necessary, work may be stopped and redone if personnel have not been scheduled in advance.

- The Earthwork Contractor is required to have suitable and sufficient equipment on the job-site to process, moisture condition, mix and compact the amount of fill being placed to the approved compaction. In addition, suitable support equipment should be available to conform with recommendations and guidelines in this report.

- Canyon cleanouts, overexcavation areas, processed ground to receive fill, key excavations, subdrains and benches should be observed by the Geotechnical Engineer prior to placement of any fill. It is the Earthwork Contractor's responsibility to notify the Geotechnical Engineer of areas that are ready for inspection.

- Excavation, filling, and subgrade preparation should be performed in a manner and sequence that will provide drainage at all times and proper control of erosion. Precipitation, springs, and seepage water encountered shall be pumped or drained to provide a suitable working surface. The Geotechnical Engineer must be informed of springs or water seepage encountered during grading or foundation construction for possible revision to the recommended construction procedures and/or installation of subdrains.

Site Preparation

- The Earthwork Contractor is responsible for all clearing, grubbing, stripping and site preparation for the project in accordance with the recommendations of the Geotechnical Engineer.

- If any materials or areas are encountered by the Earthwork Contractor which are suspected of having toxic or environmentally sensitive contamination, the Geotechnical Engineer and Owner/Builder should be notified immediately.

- Major vegetation should be stripped and disposed of off-site. This includes trees, brush, heavy grasses and any materials considered unsuitable by the Geotechnical Engineer.

- Underground structures such as basements, cesspools or septic disposal systems, mining shafts, tunnels, wells and pipelines should be removed under the inspection of the Geotechnical Engineer and recommendations provided by the Geotechnical Engineer and/or city, county or state agencies. If such structures are known or found, the Geotechnical Engineer should be notified as soon as possible so that recommendations can be formulated.

- Any topsoil, slopewash, colluvium, alluvium and rock materials which are considered unsuitable by the Geotechnical Engineer should be removed prior to fill placement.

- Remaining voids created during site clearing caused by removal of trees, foundations basements, irrigation facilities, etc., should be excavated and filled with compacted fill.

- Subsequent to clearing and removals, areas to receive fill should be scarified to a depth of 10 to 12 inches, moisture conditioned and compacted

- The moisture condition of the processed ground should be at or slightly above the optimum moisture content as determined by the Geotechnical Engineer. Depending upon field conditions, this may require air drying or watering together with mixing and/or discing.

Compacted Fills

- Soil materials imported to or excavated on the property may be utilized in the fill, provided each material has been determined to be suitable in the opinion of the Geotechnical Engineer. Unless otherwise approved by the Geotechnical Engineer, all fill materials shall be free of deleterious, organic, or frozen matter, shall contain no chemicals that may result in the material being classified as “contaminated,” and shall be very low to non-expansive with a maximum expansion index (EI) of 50. The top 12 inches of the compacted fill should have a maximum particle size of 3 inches, and all underlying compacted fill material a maximum 6-inch particle size, except as noted below.

- All soils should be evaluated and tested by the Geotechnical Engineer. Materials with high expansion potential, low strength, poor gradation or containing organic materials may require removal from the site or selective placement and/or mixing to the satisfaction of the Geotechnical Engineer.

- Rock fragments or rocks less than 6 inches in their largest dimensions, or as otherwise determined by the Geotechnical Engineer, may be used in compacted fill, provided the distribution and placement is satisfactory in the opinion of the Geotechnical Engineer.

- Rock fragments or rocks greater than 12 inches should be taken off-site or placed in accordance with recommendations and in areas designated as suitable by the Geotechnical Engineer. These materials should be placed in accordance with Plate D-8 of these Grading Guide Specifications and in accordance with the following recommendations:

    - Rocks 12 inches or more in diameter should be placed in rows at least 15 feet apart, 15 feet from the edge of the fill, and 10 feet or more below subgrade. Spaces should be left between each rock fragment to provide for placement and compaction of soil around the fragments.

    - Fill materials consisting of soil meeting the minimum moisture content requirements and free of oversize material should be placed between and over the rows of rock or

concrete. Ample water and compactive effort should be applied to the fill materials as they are placed in order that all of the voids between each of the fragments are filled and compacted to the specified density.

- Subsequent rows of rocks should be placed such that they are not directly above a row placed in the previous lift of fill. A minimum 5-foot offset between rows is recommended.

- To facilitate future trenching, oversized material should not be placed within the range of foundation excavations, future utilities or other underground construction unless specifically approved by the soil engineer and the developer/owner representative.

- Fill materials approved by the Geotechnical Engineer should be placed in areas previously prepared to receive fill and in evenly placed, near horizontal layers at about 6 to 8 inches in loose thickness, or as otherwise determined by the Geotechnical Engineer for the project.

- Each layer should be moisture conditioned to optimum moisture content, or slightly above, as directed by the Geotechnical Engineer. After proper mixing and/or drying, to evenly distribute the moisture, the layers should be compacted to at least 90 percent of the maximum dry density in compliance with ASTM D-1557-78 unless otherwise indicated.

- Density and moisture content testing should be performed by the Geotechnical Engineer at random intervals and locations as determined by the Geotechnical Engineer. These tests are intended as an aid to the Earthwork Contractor, so he can evaluate his workmanship, equipment effectiveness and site conditions. The Earthwork Contractor is responsible for compaction as required by the Geotechnical Report(s) and governmental agencies.

- Fill areas unused for a period of time may require moisture conditioning, processing and recompaction prior to the start of additional filling. The Earthwork Contractor should notify the Geotechnical Engineer of his intent so that an evaluation can be made.

- Fill placed on ground sloping at a 5-to-1 inclination (horizontal-to-vertical) or steeper should be benched into bedrock or other suitable materials, as directed by the Geotechnical Engineer. Typical details of benching are illustrated on Plates D-2, D-4, and D-5.

- Cut/fill transition lots should have the cut portion overexcavated to a depth of at least 3 feet and rebuilt with fill (see Plate D-1), as determined by the Geotechnical Engineer.

- All cut lots should be inspected by the Geotechnical Engineer for fracturing and other bedrock conditions. If necessary, the pads should be overexcavated to a depth of 3 feet and rebuilt with a uniform, more cohesive soil type to impede moisture penetration.

- Cut portions of pad areas above buttresses or stabilizations should be overexcavated to a depth of 3 feet and rebuilt with uniform, more cohesive compacted fill to impede moisture penetration.

- Non-structural fill adjacent to structural fill should typically be placed in unison to provide lateral support. Backfill along walls must be placed and compacted with care to ensure that excessive unbalanced lateral pressures do not develop. The type of fill material placed adjacent to below grade walls must be properly tested and approved by the Geotechnical Engineer with consideration of the lateral earth pressure used in the design.

Foundations

- The foundation influence zone is defined as extending one foot horizontally from the outside edge of a footing, and proceeding downward at a ½ horizontal to 1 vertical (0.5:1) inclination.

- Where overexcavation beneath a footing subgrade is necessary, it should be conducted so as to encompass the entire foundation influence zone, as described above.

- Compacted fill adjacent to exterior footings should extend at least 12 inches above foundation bearing grade. Compacted fill within the interior of structures should extend to the floor subgrade elevation.

Fill Slopes

- The placement and compaction of fill described above applies to all fill slopes. Slope compaction should be accomplished by overfilling the slope, adequately compacting the fill in even layers, including the overfilled zone and cutting the slope back to expose the compacted core

- Slope compaction may also be achieved by backrolling the slope adequately every 2 to 4 vertical feet during the filling process as well as requiring the earth moving and compaction equipment to work close to the top of the slope. Upon completion of slope construction, the slope face should be compacted with a sheepsfoot connected to a sideboom and then grid rolled. This method of slope compaction should only be used if approved by the Geotechnical Engineer.

- Sandy soils lacking in adequate cohesion may be unstable for a finished slope condition and therefore should not be placed within 15 horizontal feet of the slope face.

- All fill slopes should be keyed into bedrock or other suitable material. Fill keys should be at least 15 feet wide and inclined at 2 percent into the slope. For slopes higher than 30 feet, the fill key width should be equal to one-half the height of the slope (see Plate D-5).

- All fill keys should be cleared of loose slough material prior to geotechnical inspection and should be approved by the Geotechnical Engineer and governmental agencies prior to filling.

- The cut portion of fill over cut slopes should be made first and inspected by the Geotechnical Engineer for possible stabilization requirements. The fill portion should be adequately keyed through all surficial soils and into bedrock or suitable material. Soils should be removed from the transition zone between the cut and fill portions (see Plate D-2).

Cut Slopes

- All cut slopes should be inspected by the Geotechnical Engineer to determine the need for stabilization. The Earthwork Contractor should notify the Geotechnical Engineer when slope cutting is in progress at intervals of 10 vertical feet. Failure to notify may result in a delay in recommendations.

- Cut slopes exposing loose, cohesionless sands should be reported to the Geotechnical Engineer for possible stabilization recommendations.

- All stabilization excavations should be cleared of loose slough material prior to geotechnical inspection. Stakes should be provided by the Civil Engineer to verify the location and dimensions of the key. A typical stabilization fill detail is shown on Plate D-5.

- Stabilization key excavations should be provided with subdrains. Typical subdrain details are shown on Plates D-6.

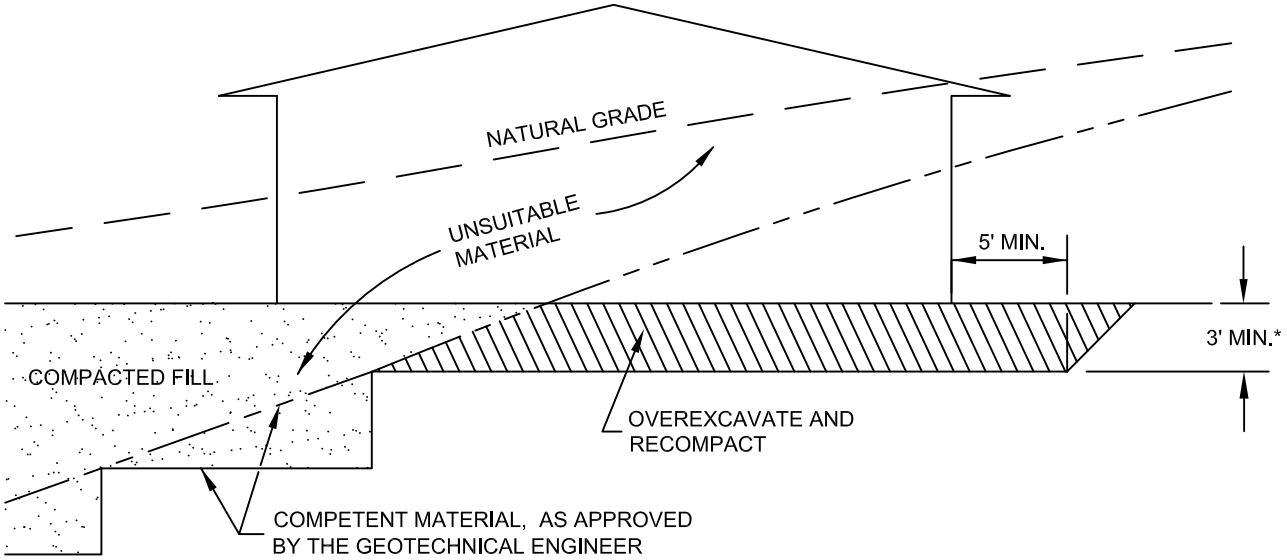
Subdrains

- Subdrains may be required in canyons and swales where fill placement is proposed. Typical subdrain details for canyons are shown on Plate D-3. Subdrains should be installed after approval of removals and before filling, as determined by the Soils Engineer.

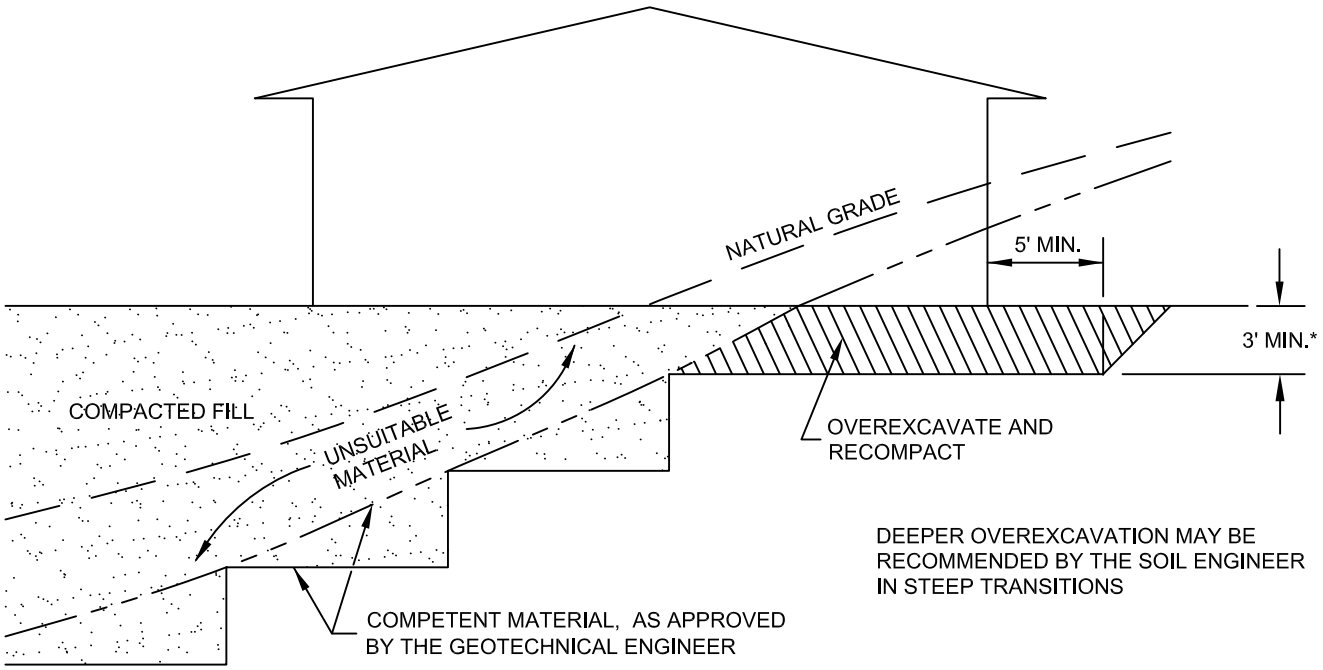
- Plastic pipe may be used for subdrains provided it is Schedule 40 or SDR 35 or equivalent. Pipe should be protected against breakage, typically by placement in a square-cut (backhoe) trench or as recommended by the manufacturer.

- Filter material for subdrains should conform to CALTRANS Specification 68-1.025 or as approved by the Geotechnical Engineer for the specific site conditions. Clean ¾-inch crushed rock may be used provided it is wrapped in an acceptable filter cloth and approved by the Geotechnical Engineer. Pipe diameters should be 6 inches for runs up to 500 feet and 8 inches for the downstream continuations of longer runs. Four-inch diameter pipe may be used in buttress and stabilization fills.

CUT LOT



CUT/FILL LOT (TRANSITION)



*SEE TEXT OF REPORT FOR SPECIFIC RECOMMENDATION. ACTUAL DEPTH OF OVEREXCAVATION MAY BE GREATER.

TRANSITION LOT DETAIL

GRADING GUIDE SPECIFICATIONS

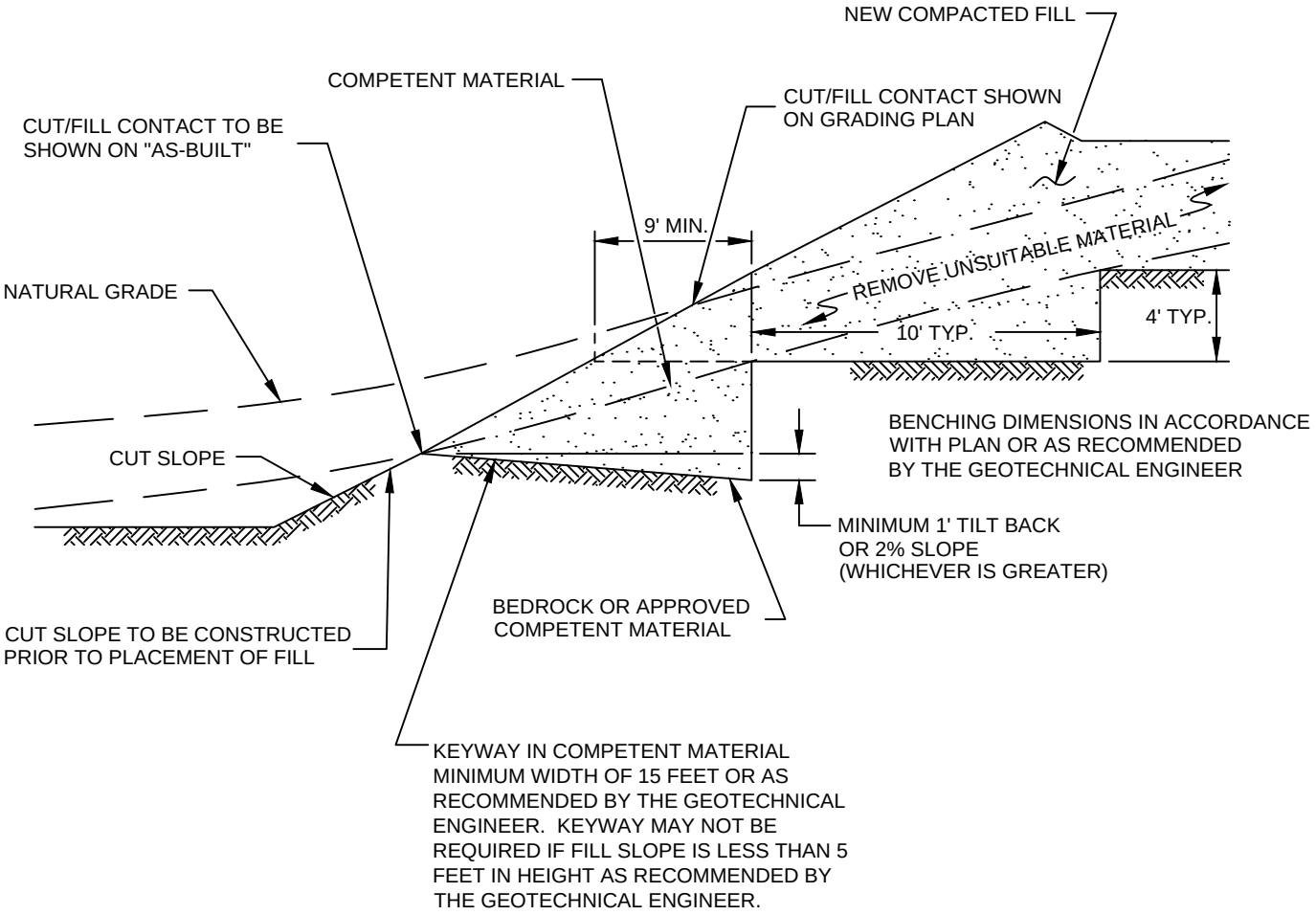
NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-1

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



FILL ABOVE CUT SLOPE DETAIL

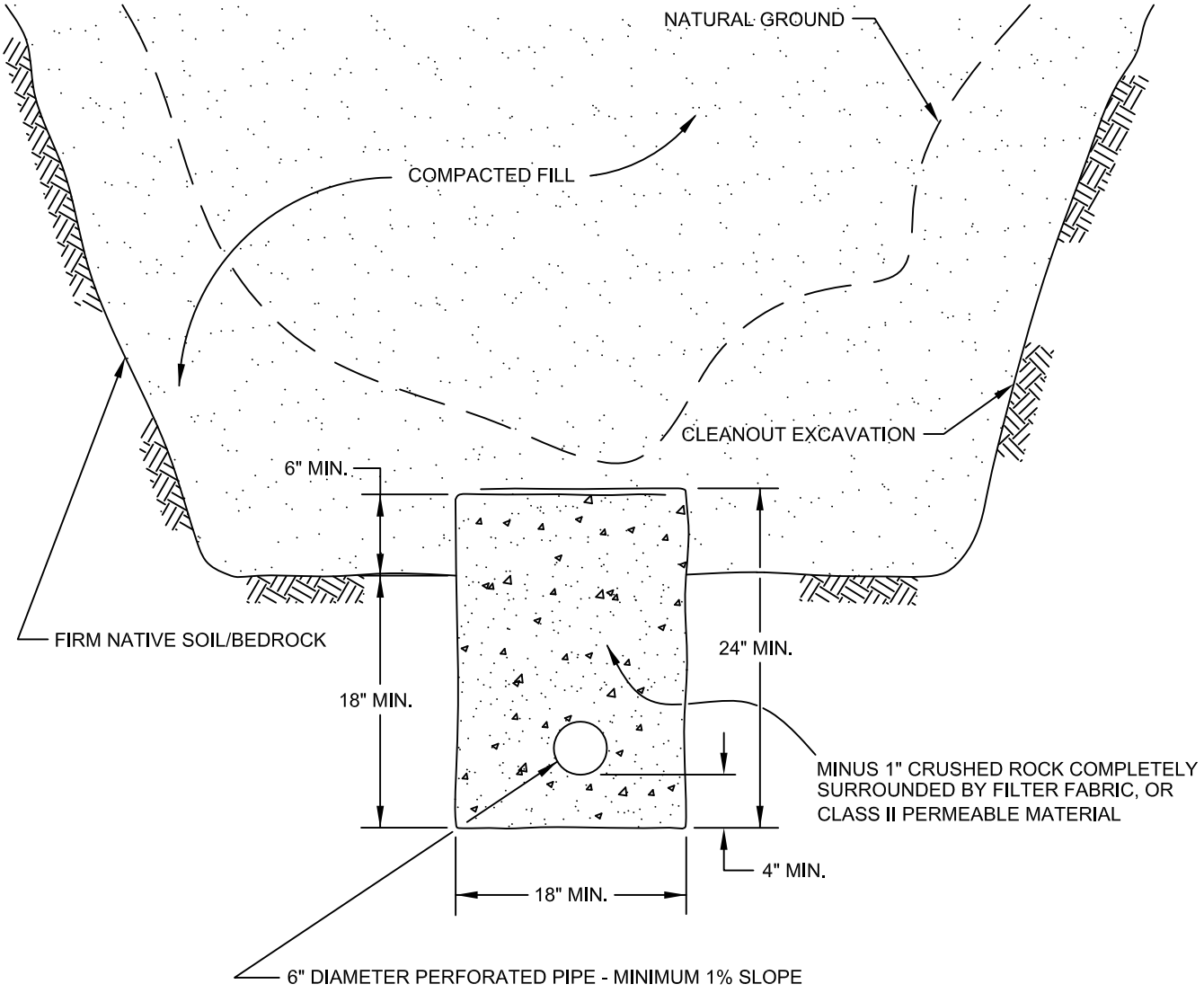
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-2

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



PIPE MATERIAL	DEPTH OF FILL OVER SUBDRAIN
ADS (CORRUGATED POLETHYLENE)	8
TRANSITE UNDERDRAIN	20
PVC OR ABS: SDR 35	35
SDR 21	100

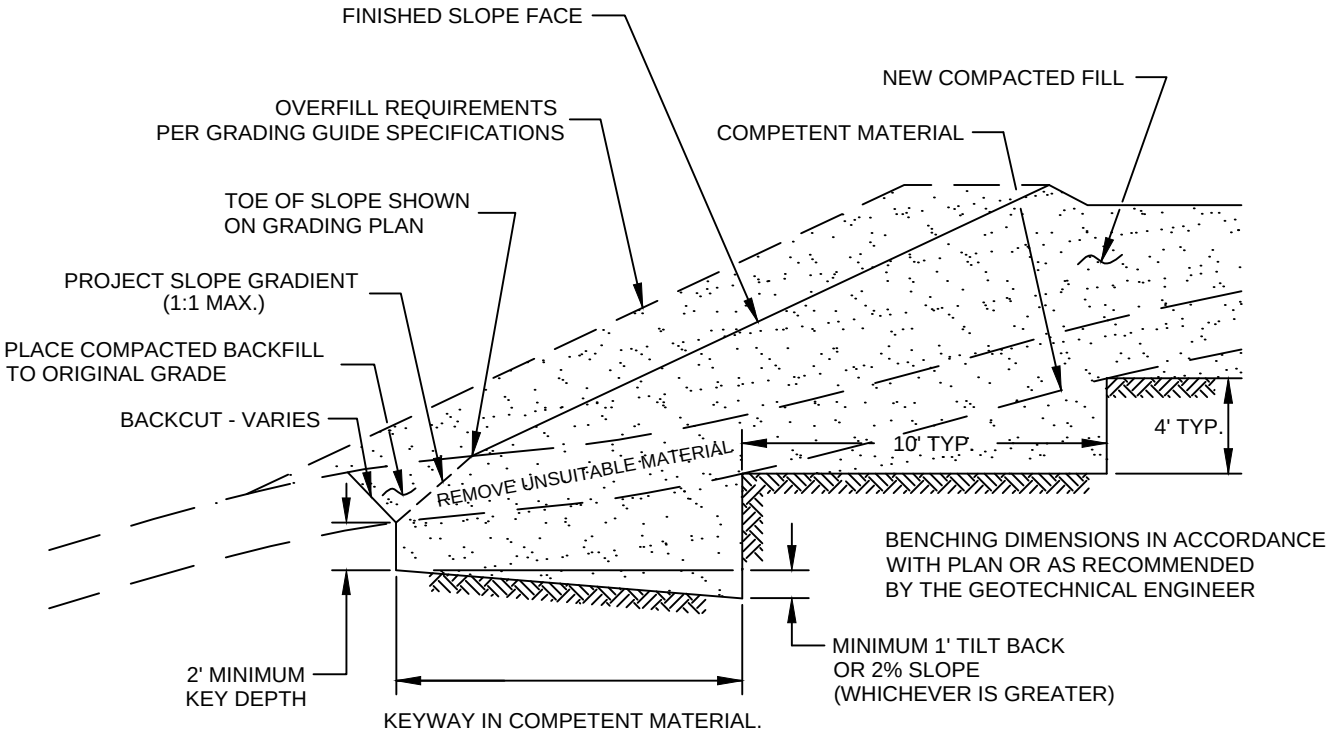
SCHEMATIC ONLY
NOT TO SCALE

CANYON SUBDRAIN DETAIL
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE
DRAWN: JAS
CHKD: GKM

PLATE D-3

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



NOTE:
BENCHING SHALL BE REQUIRED WHEN NATURAL SLOPES ARE EQUAL TO OR STEEPER THAN 5:1 OR WHEN RECOMMENDED BY THE GEOTECHNICAL ENGINEER.

FILL ABOVE NATURAL SLOPE DETAIL

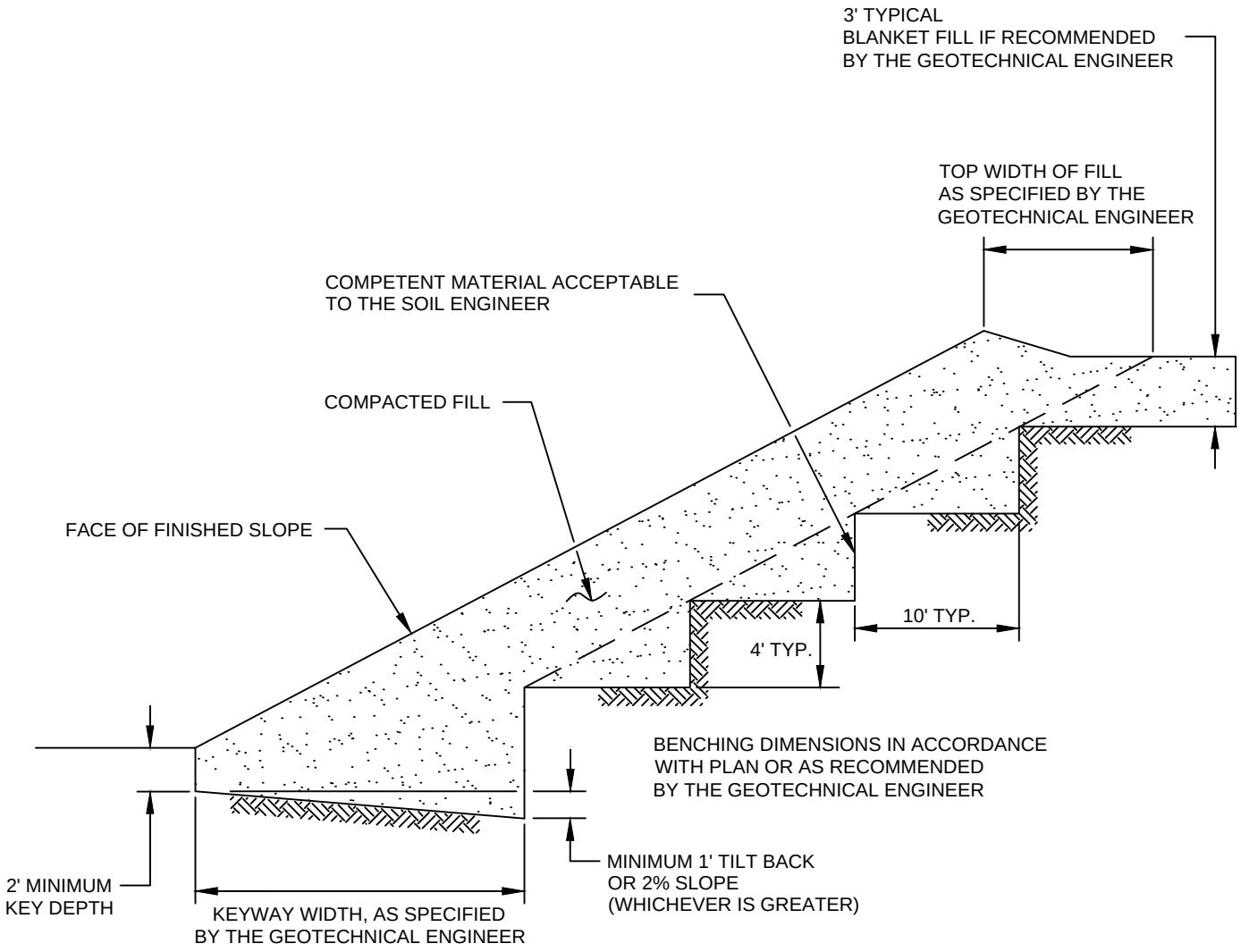
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-4

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



STABILIZATION FILL DETAIL

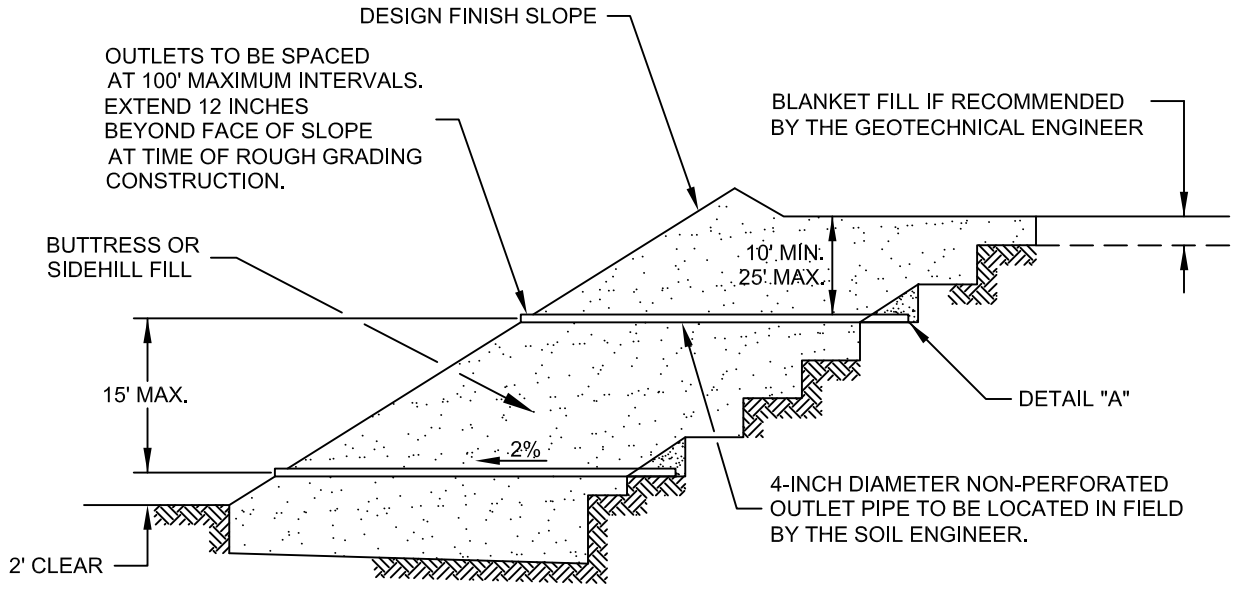
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-5

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



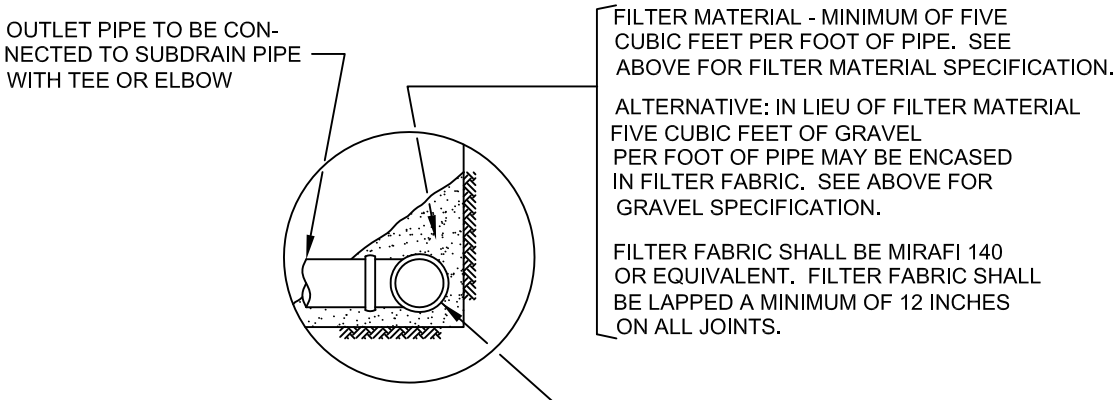
"FILTER MATERIAL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT: (CONFORMS TO EMA STD. PLAN 323)

SIEVE SIZE	PERCENTAGE PASSING
1"	100
3/4"	90-100
3/8"	40-100
NO. 4	25-40
NO. 8	18-33
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

"GRAVEL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT:

SIEVE SIZE	MAXIMUM PERCENTAGE PASSING
1 1/2"	100
NO. 4	50
NO. 200	8

SAND EQUIVALENT = MINIMUM OF 50



DETAIL "A"

NOTES:
1. TRENCH FOR OUTLET PIPES TO BE BACKFILLED WITH ON-SITE SOIL.

SLOPE FILL SUBDRAINS

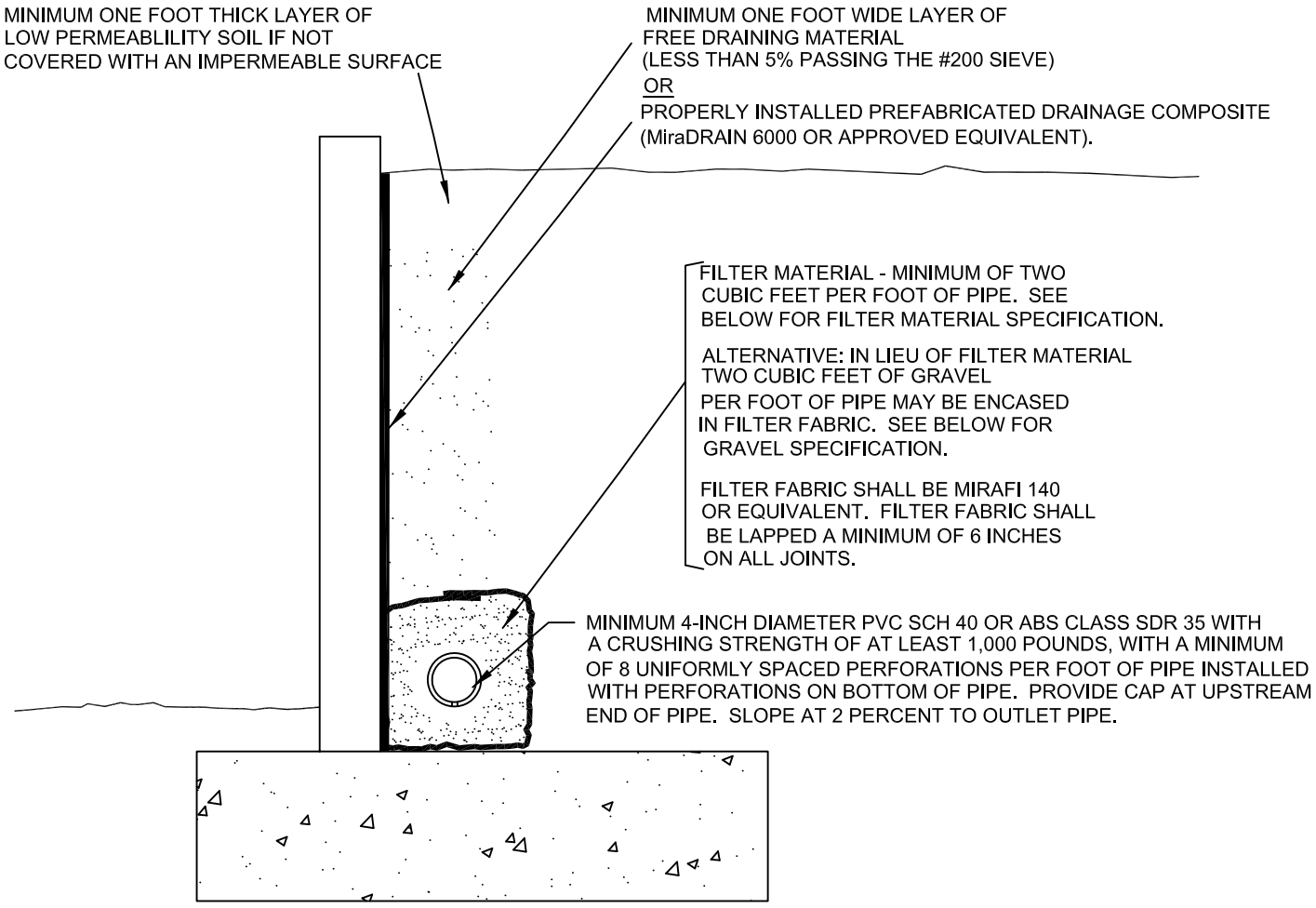
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-6

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



"FILTER MATERIAL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT: (CONFORMS TO EMA STD. PLAN 323)

SIEVE SIZE	PERCENTAGE PASSING
1"	100
3/4"	90-100
3/8"	40-100
NO. 4	25-40
NO. 8	18-33
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

"GRAVEL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT:

SIEVE SIZE	MAXIMUM PERCENTAGE PASSING
1 1/2"	100
NO. 4	50
NO. 200	8

SAND EQUIVALENT = MINIMUM OF 50

RETAINING WALL BACKDRAINS

GRADING GUIDE SPECIFICATIONS

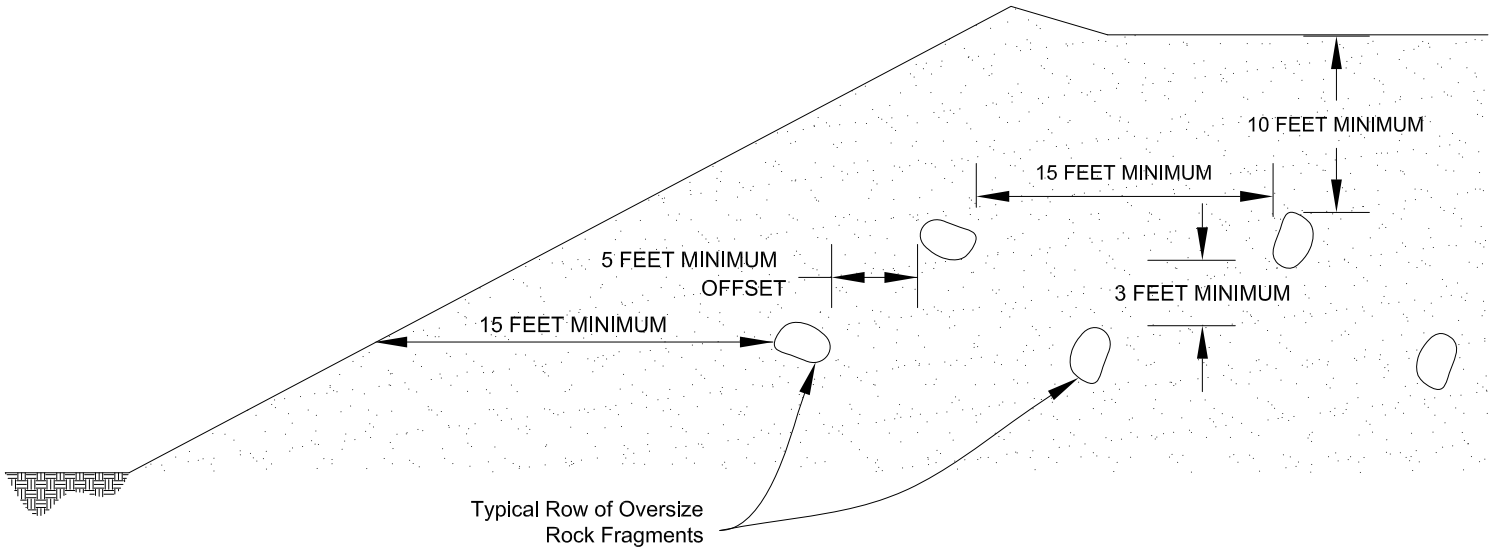
NOT TO SCALE

DRAWN: JAS
CHKD: GKM

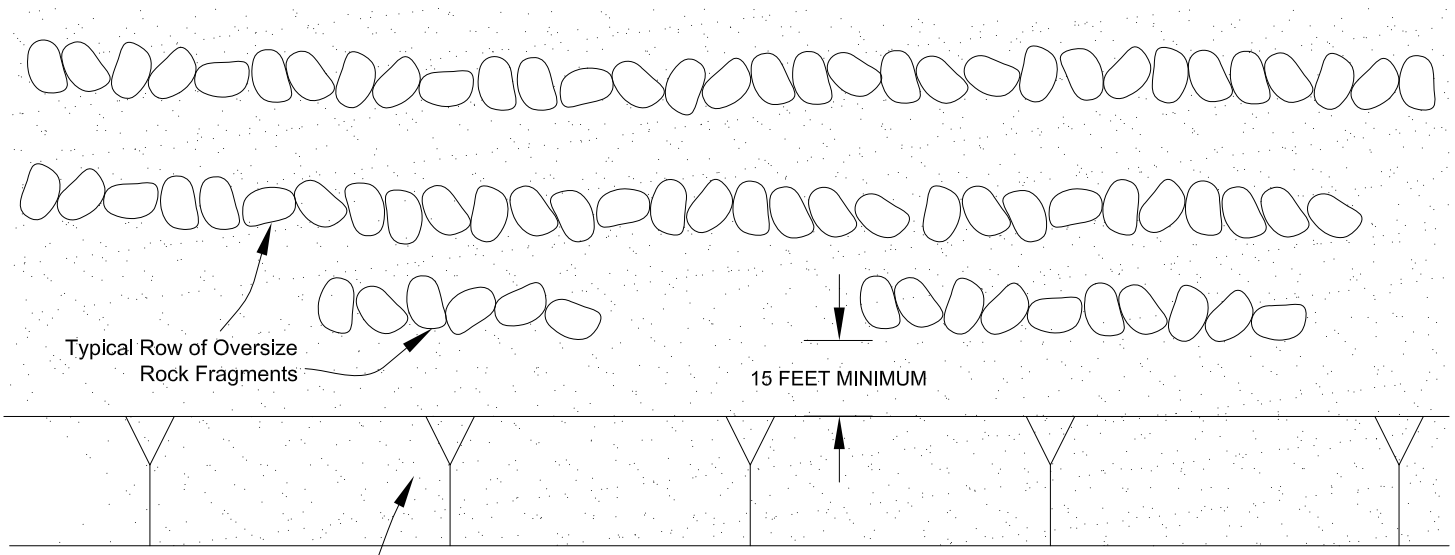
PLATE D-7

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



Section View



Plan View

PLACEMENT OF OVERSIZED MATERIAL

GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: PM
CHKD: GKM

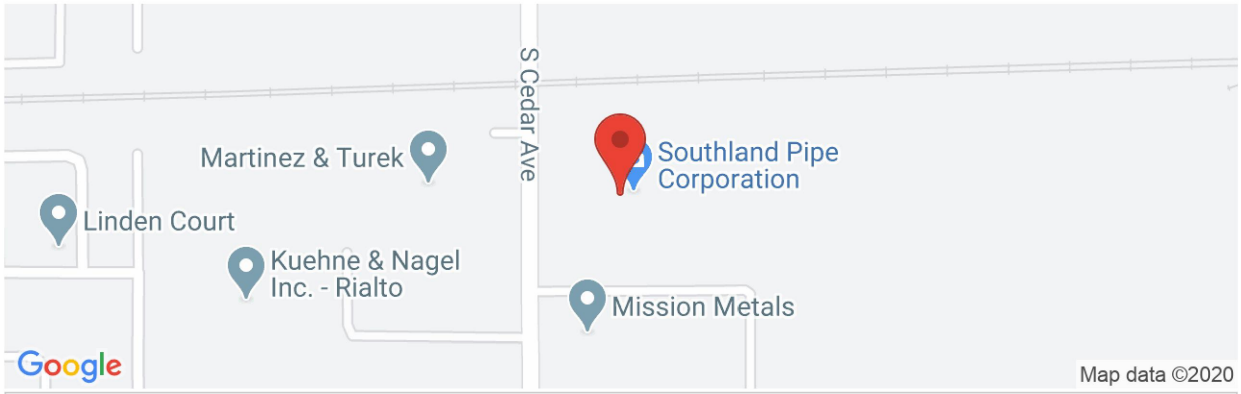
PLATE D-8

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL

APPENDIX E

Latitude, Longitude: 34.095123, -117.395514



Date	7/29/2020, 1:59:37 PM
Design Code Reference Document	ASCE7-16
Risk Category	III
Site Class	D - Stiff Soil

Type	Value	Description
S_S	1.786	MCE_R ground motion. (for 0.2 second period)
S_1	0.7	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.786	Site-modified spectral acceleration value
S_{M1}	null -See Section 11.4.8	Site-modified spectral acceleration value
S_{DS}	1.19	Numeric seismic design value at 0.2 second SA
S_{D1}	null -See Section 11.4.8	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	null -See Section 11.4.8	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	null -See Section 11.4.8	Site amplification factor at 1.0 second
PGA	0.755	MCE_G peak ground acceleration
F_{PGA}	1.1	Site amplification factor at PGA
PGA_M	0.831	Site modified peak ground acceleration
T_L	12	Long-period transition period in seconds
SsRT	2.18	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	2.383	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.786	Factored deterministic acceleration value. (0.2 second)
S1RT	0.851	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.955	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.7	Factored deterministic acceleration value. (1.0 second)
PGAd	0.755	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	0.915	Mapped value of the risk coefficient at short periods
C_{R1}	0.891	Mapped value of the risk coefficient at a period of 1 s

SOURCE: SEAOC/OSHPD Seismic Design Maps Tool
<https://seismicmaps.org/>

SEISMIC DESIGN PARAMETERS - 2019 CBC
PROPOSED COMMERCIAL/INDUSTRIAL BUILDING
RIALTO, CALIFORNIA

DRAWN: JLL
CHKD: RGT
SCG PROJECT 21G149-1
PLATE E-1

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL

Durst Drive Warehouse

GREENHOUSE GAS ANALYSIS

CITY OF RIALTO

PREPARED BY:

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Alyssa Barnett
abarnett@urbanxroads.com

JANUARY 26, 2022

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LIST OF ABBREVIATED TERMS

%	Percent
°C	Degrees Celsius
°F	Degrees Fahrenheit
(1)	Reference
2017 Scoping Plan	Final 2017 Scoping Plan Update
AB	Assembly Bill
AB 32	Global Warming Solutions Act of 2006
AB 1493	Pavley Fuel Efficiency Standards
AB 1881	California Water Conservation Landscaping Act of 2006
Annex I	Industrialized Nations
APA	Administrative Procedure Act
AQIA	*Durst Drive Warehouse Air Quality Impact Analysis*
BAU	Business as Usual
C_2F_6	Hexafluoroethane
C_2H_6	Ethane
$C_2H_2F_4$	Tetrafluroethane
$C_2H_4F_2$	Ethylidene Fluoride
CAA	Federal Clean Air Act
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGAPS	California LBNL GHG Analysis of Policies Spreadsheet
CALGreen	California Green Building Standards Code
CalSTA	California State Transportation Agency
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resource Board
CBSC	California Building Standards Commission
CEC	California Energy Commission
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CEQA Guidelines	*2019 CEQA Statute and Guidelines*
CDFA	California Department of Food and Agriculture
CF_4	Tetrafluoromethane
CFC	Chlorofluorocarbons

CFC-113	Trichlorotrifluoroethane
CH_4	Methane
City	City of Rialto
CNRA	California Natural Resources Agency
CNRA 2009	*2009 California Climate Adaptation Strategy*
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
Convention	United Nation's Framework Convention on Climate Change
COP	Conference of the Parties
CPUC	California Public Utilities Commission
CTC	California Transportation Commission
DOF	Department of Finance
DWR	Department of Water Resources
EMFAC	Emission Factor Model
EPA	Environmental Protection Agency
EV	Electric Vehicle
FED	Functional Equivalent Document
GCC	Global Climate Change
Gg	Gigagram
GHGA	Greenhouse Gas Analysis
GO-Biz	Governor's Office of Business and Economic Development
gpd	Gallons Per Day
gpm	Gallons Per Minute
GWP	Global Warming Potential
H_2O	Water
HFC	Hydrofluorocarbons
HDT	Heavy-Duty Trucks
HFC-23	Fluoroform
HFC-134a	1,1,1,2-tetrafluoroethane
HFC-152a	1,1-difluoroethane
HHDT	Heavy-Heavy-Duty Trucks
hp	Horsepower
IBANK	California Infrastructure and Economic Development Bank
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Planning
ISO	Independent System Operator
ITE	Institute of Transportation Engineers
kWh	Kilowatt Hours

lbs	Pounds
LBNL	Lawrence Berkeley National Laboratory
LCA	Life-Cycle Analysis
LCD	Liquid Crystal Display
LCFS	Low Carbon Fuel Standard or Executive Order S-01-07
LDA	Light-Duty Auto
LDT1/LDT2	Light-Duty Trucks
LEV III	Low-Emission Vehicle
LHDT1/LHDT2	Light-Heavy-Duty Trucks
LULUCF	Land-Use, Land-Use Change and Forestry
MARB/IPA	March Air Reserve Base/Inland Port Airport
MCY	Motorcycles
MD	Medium Duty
MDT	Medium-Duty Trucks
MDV	Medium-Duty Vehicles
MHDT	Medium-Heavy-Duty Tucks
MMR	Mandatory Reporting Rule
$MMTCO_2e$	Million Metric Ton of Carbon Dioxide Equivalent
mpg	Miles Per Gallon
MPOs	Metropolitan Planning Organizations
$MMTCO_2e/yr$	Million Metric Ton of Carbon Dioxide Equivalent Per Year
MT/yr	Metric Tons Per Year
$MTCO_2e$	Metric Ton of Carbon Dioxide Equivalent
$MTCO_2e/yr$	Metric Ton of Carbon Dioxide Equivalent Per Year
MW	Megawatts
MWh	Megawatts Per Hour
MWELO	California Department of Water Resources' Model Water Efficient
N_2O	Nitrous Oxide
NDC	Nationally Determined Contributions
NF_3	Nitrogen Trifluoride
NHTSA	National Highway Traffic Safety Administration
NIOSH	National Institute for Occupational Safety and Health
NO_X	Nitrogen Oxides
Non-Annex I	Developing Nations
OAL	Office of Administrative Law
OPR	Office of Planning and Research
PFC	Perfluorocarbons

ppb	Parts Per Billion
ppm	Parts Per Million
ppt	Parts Per Trillion
Project	Durst Drive Warehouse
RMC	Riverside Municipal Code
RTP	Regional Transportation Plan
SAFE	Safer Affordable Fuel-Efficient Vehicles Rule
SB	Senate Bill
SB 32	California Global Warming Solutions Act of 2006
SB 375	Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies
SB 1078	Renewable Portfolio Standards
SB 1368	Statewide Retail Provider Emissions Performance Standards
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
Scoping Plan	California Air Resources Board Climate Change Scoping Plan
SCS	Sustainable Communities Strategy
sf	Square Feet
SF_6	Sulfur Hexaflouride
SGC	Strategic Growth Council
SHGC	Solar Heat Gain Coefficient
SLPS	Short-Lived Climate Pollutant Strategy
SP	Service Population
SWCRB	State Water Resources Control Board
TA	*Durst Drive Warehouse Traffic Analysis*
TDM	Transportation Demand Measures
Title 20	Appliance Energy Efficiency Standards
Title 24	California Building Code
U.N.	United Nations
U.S.	United States
UNFCCC	United Nations' Framework Convention on Climate Change
URBEMIS	Urban Emissions
UTR	Utility Tractors
VFP	Vehicle Fueling Positions
VMT	Vehicle Miles Traveled

WCI	Western Climate Initiative
WRCOG	Western Riverside Council of Governments
WRI	World Resources Institute
ZE/NZE	Zero and Near-Zero Emissions
ZEV	Zero-Emissions Vehicles

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Durst Drive Warehouse Greenhouse Gas Analysis* (GHGA) is summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the *California Environmental Quality Act (CEQA) Guidelines* (*CEQA Guidelines* (1). Table ES-1 shows the findings of significance for potential greenhouse gas (GHG) impacts under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
GHG Impact #1: Would the Project generate GHG emissions either directly or indirectly, that may have a significant impact on the environment?	3.7	*Less Than Significant*	*n/a*
GHG Impact #2: Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?	3.7	*Less Than Significant*	*n/a*

ES.2 PROJECT REQUIREMENTS

The Project would be required to comply with regulations imposed by the State of California and the South Coast Air Quality Management District (SCAQMD) aimed at the reduction of air pollutant emissions. Those that are directly and indirectly applicable to the Project and that would assist in the reduction of GHG emissions include:

- Global Warming Solutions Act of 2006 (Assembly Bill (AB) 32) (2).
- Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies (Senate Bill (SB) 375) (3).
- Pavley Fuel Efficiency Standards (AB 1493). Establishes fuel efficiency ratings for new vehicles (4).
- California Building Code (Title 24 California Code of Regulations (CCR)) and CALGreen standards. Establishes energy efficiency requirements for new construction (5).
- Appliance Energy Efficiency Standards (Title 20 CCR). Establishes energy efficiency requirements for appliances (6).
- Low Carbon Fuel Standard (LCFS). Requires carbon content of fuel sold in California to be 10 percent (%) less by 2020 (7).
- California Water Conservation in Landscaping Act of 2006 (AB 1881). Requires local agencies to adopt the Department of Water Resources updated Water Efficient Landscape Ordinance or

equivalent by January 1, 2010, to ensure efficient landscapes in new development and reduced water waste in existing landscapes (8).

- Statewide Retail Provider Emissions Performance Standards (SB 1368). Requires energy generators to achieve performance standards for GHG emissions (9).
- Renewable Portfolio Standards (SB 1078 – also referred to as RPS). Requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources to 20% by 2010 and 33% by 2020 (10).
- California Global Warming Solutions Act of 2006 (SB 32). Requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15 (11).

Promulgated regulations that will affect the Project's emissions are accounted for in the Project's GHG calculations provided in this report. In particular, AB 1493, LCFS, and RPS, and therefore are accounted for in the Project's emission calculations.

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1 INTRODUCTION

This report presents the results of the GHGA prepared by Urban Crossroads, Inc., for the proposed Durst Drive Warehouse (Project). The purpose of this GHGA is to evaluate Project-related construction and operational emissions and determine the level of GHG impacts as a result of constructing and operating the Project.

1.1 SITE LOCATION

The proposed Durst Drive Warehouse site is loc located at 1230 West Durst Drive in the City of Rialto, as shown on Exhibit 1-A.

The Project is surrounded by industrial uses. According to the City of Rialto Land Use Map. As per the Land Use Map, the Project site is designated for Light Industrial uses. The Light Industrial land use designation allows for light industrial activity such as processing, packaging, machinery repair, fabrication, distribution, warehousing and storage, research and development, and similar uses which are low impact (12).

1.2 PROJECT DESCRIPTION

The Project is proposed to consist of a single 201,239 square foot (sf) warehouse building which includes APNs 1280-622-5, -6, and -7. However, this analysis was performed on an earlier version of the site plan that included a larger building floor area than what is currently proposed, and therefore, the analysis overstates the Project's impacts[1]. It is anticipated that the Project would be developed in a single phase with an anticipated Opening Year of 2023. The proposed Project land use is consistent with the City's Light Industrial land use designation.

It is expected that the Project business operations would primarily be conducted within the enclosed buildings, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. This analysis includes a conservative assumption of on-site Project-related emission sources for potential future tenants, including architectural coatings, consumer products, landscape maintenance equipment, natural gas, electricity, mobile operations, and on-site cargo handling equipment. This analysis is intended to describe GHG impacts associated with the expected typical operational activities at the Project site. To present a conservative approach, this report assumes the Project would operate 24-hours daily for seven days per week.

[1] For purposes of this analysis, a building floor area of 203,350 square feet was evaluated.

EXHIBIT 1-A: LOCATION MAP

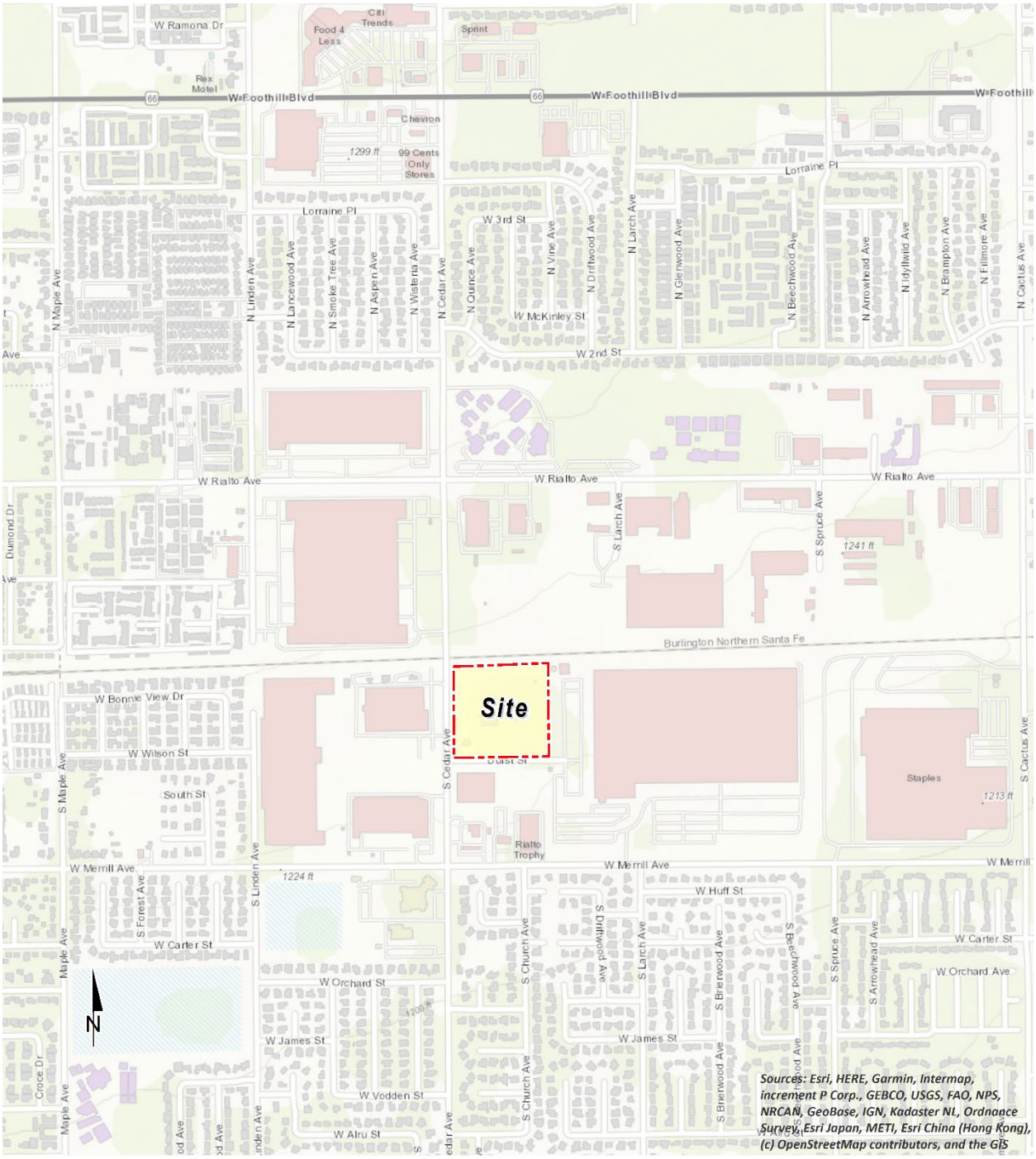
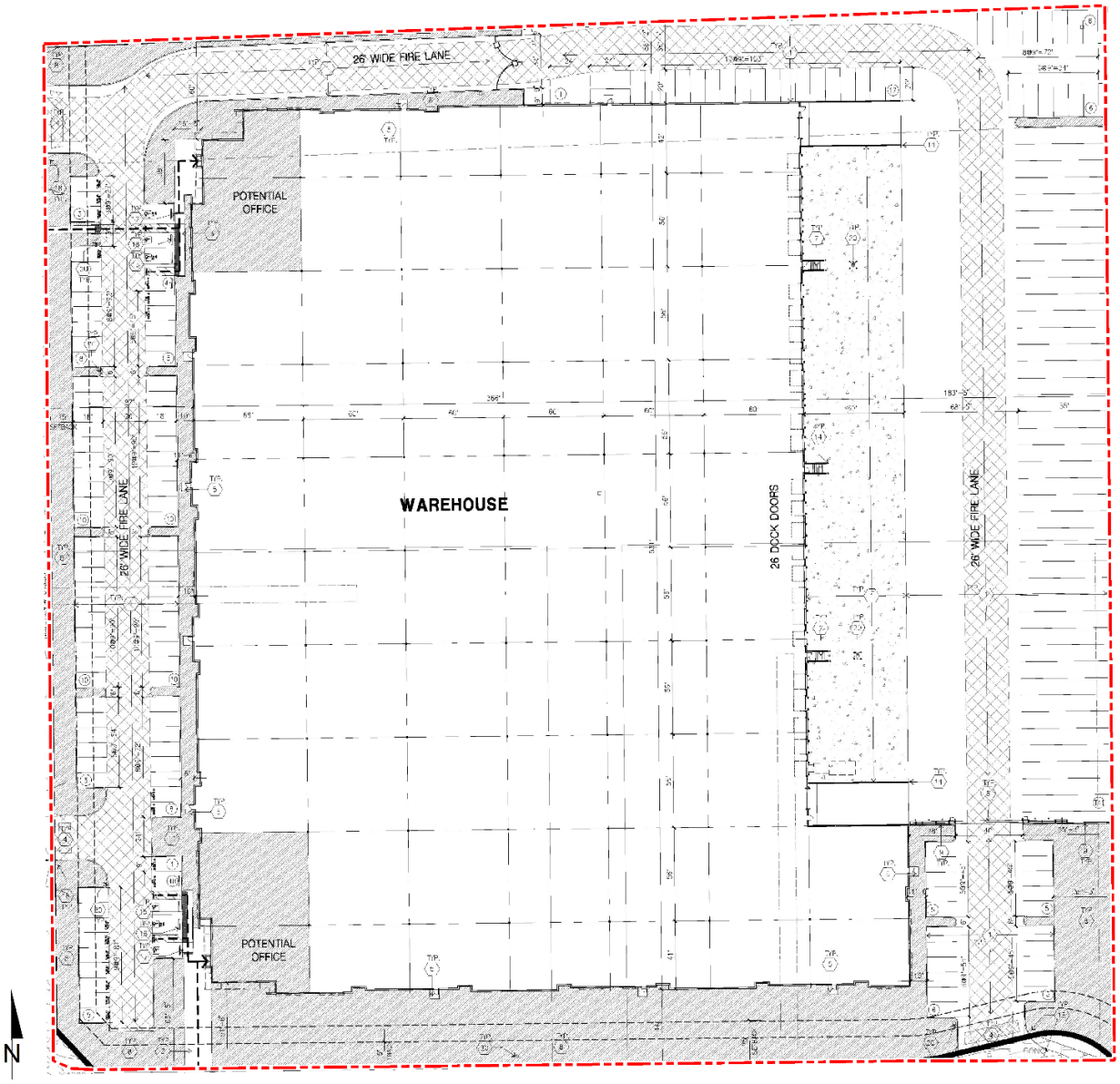


EXHIBIT 1-B: SITE PLAN



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2 CLIMATE CHANGE SETTING

2.1 INTRODUCTION TO GLOBAL CLIMATE CHANGE (GCC)

GCC is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. The majority of scientists believe that the climate shift taking place since the Industrial Revolution is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in the earth's atmosphere, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. The majority of scientists believe that this increased rate of climate change is the result of GHGs resulting from human activity and industrialization over the past 200 years.

An individual project like the proposed Project evaluated in this GHGA cannot generate enough GHG emissions to affect a discernible change in global climate. However, the proposed Project may participate in the potential for GCC by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, Section 3.0 will evaluate the potential for the proposed Project to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect.

2.2 GLOBAL CLIMATE CHANGE DEFINED

GCC refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation, and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO_2, N_2O, CH_4, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the earth's atmosphere, but prevent radioactive heat from escaping, thus warming the earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages.

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic activity. Without the natural GHG effect, the earth's average temperature would be approximately 61 degrees Fahrenheit (°F) cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature.

2.3 GHGS

2.3.1 GHGS AND HEALTH EFFECTS

GHGs trap heat in the atmosphere, creating a GHG effect that results in global warming and climate change. Many gases demonstrate these properties and as discussed in Table 2-1. For the purposes of this analysis, emissions of CO_2, CH_4, and N_2O were evaluated (see Table 3-1 later in this report) because these gases are the primary contributors to GCC from development projects.

Although there are other substances such as fluorinated gases that also contribute to GCC, these fluorinated gases were not evaluated as their sources are not well-defined and do not contain accepted emissions factors or methodology to accurately calculate these gases.

TABLE 2-1: GHGS

GHGs	Description	Sources	Health Effects
Water	Water is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. Climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to 'hold' more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop would continue is	The main source of water vapor is evaporation from the oceans (approximately 85%). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.	There are no known direct health effects related to water vapor at this time. It should be noted however that when some pollutants react with water vapor, the reaction forms a transport mechanism for some of these pollutants to enter the human body through water vapor.

GHGs	Description	Sources	Health Effects
	unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it would eventually condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the earth's surface and heat it up) (13).		
CO_2	CO_2 is an odorless and colorless GHG. Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO_2 concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30%. Left unchecked, the concentration of CO_2 in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources (14).	CO_2 is emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. CO_2 is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks (15).	Outdoor levels of CO_2 are not high enough to result in negative health effects. According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of CO_2 can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of CO_2 in the earth's atmosphere are estimated to be approximately 370 ppm, the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15 minute period (16).

GHGs	Description	Sources	Health Effects
CH_4	CH_4 is an extremely effective absorber of radiation, although its atmospheric concentration is less than CO_2 and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs.	CH_4 has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH_4. Other anthropocentric sources include fossil-fuel combustion and biomass burning (17).	CH_4 is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Exposure to elevated levels of CH_4 can cause asphyxiation, loss of consciousness, headache and dizziness, nausea and vomiting, weakness, loss of coordination, and an increased breathing rate.
N_2O	N_2O, also known as laughing gas, is a colorless GHG. Concentrations of N_2O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb).	N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream	N_2O can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage) (18).

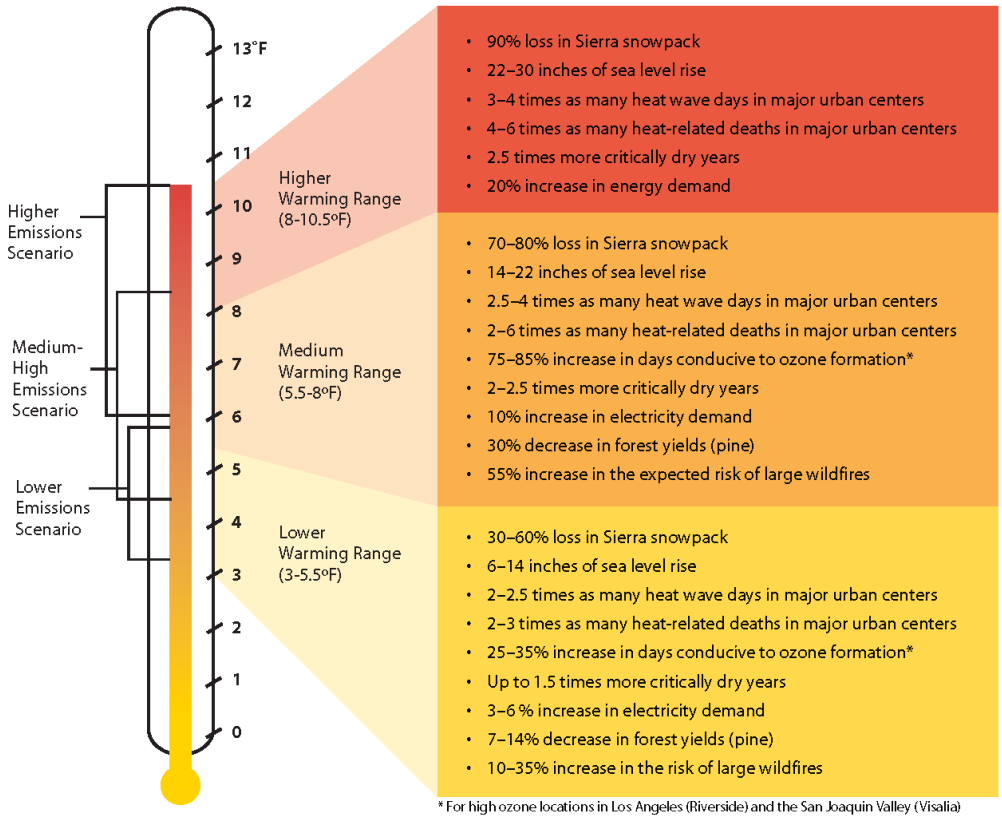
GHGs	Description	Sources	Health Effects
		bottles. It is also used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. N_2O can be transported into the stratosphere, be deposited on the earth's surface, and be converted to other compounds by chemical reaction (18).	
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface).	CFCs have no natural source but were first synthesized in 1928. They were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs would remain in the atmosphere for over 100 years (19).	In confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation.

GHGs	Description	Sources	Health Effects
HFCs	HFCs are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential (GWP). The HFCs with the largest measured atmospheric abundances are (in order), Fluoroform (HFC-23), 1,1,1,2-tetrafluoroethane (HFC-134a), and 1,1-difluoroethane (HFC-152a). Prior to 1990, the only significant emissions were of HFC-23. HCF-134a emissions are increasing due to its use as a refrigerant.	HFCs are manmade for applications such as automobile air conditioners and refrigerants.	No health effects are known to result from exposure to HFCs.
PFCs	PFCs have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above earth's surface, are able to destroy the compounds. Because of this, PFCs have exceptionally long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). The EPA estimates that concentrations of CF_4 in the atmosphere are over 70 parts per trillion (ppt).	The two main sources of PFCs are primary aluminum production and semiconductor manufacture.	No health effects are known to result from exposure to PFCs.
SF_6	SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900) (20). The EPA indicates that concentrations in the 1990s were about 4 ppt.	SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.	In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.

GHGs	Description	Sources	Health Effects
Nitrogen Trifluoride (NF_3)	NF_3 is a colorless gas with a distinctly moldy odor. The World Resources Institute (WRI) indicates that NF_3 has a 100-year GWP of 17,200 (21).	NF_3 is used in industrial processes and is produced in the manufacturing of semiconductors, Liquid Crystal Display (LCD) panels, types of solar panels, and chemical lasers.	Long-term or repeated exposure may affect the liver and kidneys and may cause fluorosis (22).

The potential health effects related directly to the emissions of CO_2, CH_4, and N_2O as they relate to development projects such as the proposed Project are still being debated in the scientific community. Their cumulative effects to GCC have the potential to cause adverse effects to human health. Increases in Earth's ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Scientists also purport those higher ambient temperatures would increase disease survival rates and result in more widespread disease. Climate change would likely cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas (23). Exhibit 2-A presents the potential impacts of global warming (24).

EXHIBIT 2-A: SUMMARY OF PROJECTED GLOBAL WARMING IMPACT, 2070-2099 (AS COMPARED WITH 1961-1990)



Source: Barbara H. Allen-Diaz. "Climate change affects us all." *University of California, Agriculture and Natural Resources*, 2009.

2.4 GLOBAL WARMING POTENTIAL

GHGs have varying GWP values. GWP of a GHG indicates the amount of warming a gas cause over a given period of time and represents the potential of a gas to trap heat in the atmosphere. CO_2 is utilized as the reference gas for GWP, and thus has a GWP of 1. CO_2 equivalent (CO_2e) is a term used for describing the difference GHGs in a common unit. CO_2e signifies the amount of CO_2 which would have the equivalent GWP.

The atmospheric lifetime and GWP of selected GHGs are summarized at Table 2-2. As shown in the table below, GWP for the 2nd Assessment Report, the Intergovernmental Panel on Climate Change (IPCC)'s scientific and socio-economic assessment on climate change, range from 1 for CO_2 to 23,900 for SF_6 and GWP for the IPCC's 5th Assessment Report range from 1 for CO_2 to 23,500 for SF_6 (25).

TABLE 2-2: GWP AND ATMOSPHERIC LIFETIME OF SELECT GHGS

Gas	Atmospheric Lifetime (years)	GWP (100-year time horizon)	
		2nd Assessment Report	5th Assessment Report
CO_2	See*	1	1
CH_4	12 .4	21	28
N_2O	121	310	265
HFC-23	222	11,700	12,400
HFC-134a	13.4	1,300	1,300
HFC-152a	1.5	140	138
SF_6	3,200	23,900	23,500

*As per Appendix 8.A. of IPCC's 5th Assessment Report, no single lifetime can be given.
Source: Table 2.14 of the IPCC Fourth Assessment Report, 2007

2.5 GHG EMISSIONS INVENTORIES

2.5.1 GLOBAL

Worldwide anthropogenic GHG emissions are tracked by the IPCC for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Human GHG emissions data for Annex I nations are available through 2018. Based on the latest available data, the sum of these emissions totaled approximately 28,768,440 gigagram (Gg) CO_2e[2] (26) (27) as summarized on Table 2-3.

[2] The global emissions are the sum of Annex I and non-Annex I countries, without counting Land-Use, Land-Use Change and Forestry (LULUCF). For countries without 2018 data, the United Nations' Framework Convention on Climate Change (UNFCCC) data for the most recent year were used U.N. Framework Convention on Climate Change, "Annex I Parties – GHG total without LULUCF," The most recent GHG emissions for China and India are from 2014 and 2010, respectively.

2.5.2 UNITED STATES

As noted in Table 2-3, the United States, as a single country, was the number two producer of GHG emissions in 2018.

TABLE 2-3: TOP GHG PRODUCING COUNTRIES AND THE EUROPEAN UNION [3]

Emitting Countries	GHG Emissions (Gg CO_2e)
China	12,300,200
United States	6,676,650
European Union (28-member countries)	4,232,274
Russian Federation	2,220,123
India	2,100,850
Japan	1,238,343
Total	**28,768,440**

2.5.3 STATE OF CALIFORNIA

California has significantly slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls but is still a substantial contributor to the United States (U.S.) emissions inventory total (28). The California Air Resource Board (CARB) compiles GHG inventories for the State of California. Based upon the 2020 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2019 GHG emissions period, California emitted an average 418.1 million metric tons of CO_2e per year ($MMTCO_2e/yr$) or 418,100 Gg CO_2e (6.26% of the total United States GHG emissions) (29).

2.6 EFFECTS OF CLIMATE CHANGE IN CALIFORNIA

2.6.1 PUBLIC HEALTH

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35% under the lower warming range to 75 to 85% under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. Based on *Our Changing Climate Assessing the Risks to California by the California Climate Change Center*, large wildfires could become up to 55% more frequent if GHG emissions are not significantly reduced (30).

In addition, under the higher warming range scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a

[3] Used http://unfccc.int data for Annex I countries. Consulted the CAIT Climate Data Explorer in https://www.climatewatchdata.org site to reference Non-Annex I countries of China and India.

significant increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

2.6.2 WATER RESOURCES

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

If temperatures continue to increase, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90%. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. How much snowpack could be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. It could also adversely affect winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major fresh water supply.

2.6.3 AGRICULTURE

Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25% of the water supply needed. Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits, and nuts.

In addition, continued GCC could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued GCC could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

2.6.4 FORESTS AND LANDSCAPES

GCC has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks would not be uniform throughout the state. In contrast, wildfires in northern California could increase by up to 90% due to decreased precipitation.

Moreover, continued GCC has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80% by the end of the century as a result of increasing temperatures. The productivity of the state's forests has the potential to decrease as a result of GCC.

2.6.5 RISING SEA LEVELS

Rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the state's coastal regions. Under the higher warming range scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate low-lying coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12-14 inches.

2.7 REGULATORY SETTING

2.7.1 INTERNATIONAL

Climate change is a global issue involving GHG emissions from all around the world; therefore, countries such as the ones discussed below have made an effort to reduce GHGs.

IPCC

In 1988, the United Nations (U.N.) and the World Meteorological Organization established the IPCC to assess the scientific, technical, and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

UNITED NATION'S FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)

On March 21, 1994, the U.S. joined a number of countries around the world in signing the Convention. Under the UNFCCC, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

INTERNATIONAL CLIMATE CHANGE TREATIES

The Kyoto Protocol is an international agreement linked to the UNFCCC. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at an average of 5% against 1990 levels over the five-year period 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the UN Climate Change Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2 degrees Celsius (°C) above pre-industrial levels, subject to a review in 2015. The Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings gradually gained consensus among participants on individual climate change issues.

On September 23, 2014, more than 100 Heads of State and Government and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the U.N. At the Summit, heads of government, business and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Parties to the UNFCCC reached a landmark agreement on December 12, 2015, in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a four-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties (COP) 21. Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2°C, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review;
- Commit all countries to submit new NDCs every five years, with the clear expectation that they would "represent a progression" beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly would not "involve or provide a basis for any liability or compensation;"
- Require parties engaging in international emissions trading to avoid "double counting;" and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC (C2ES 2015a) (31).

Following President Biden's day one executive order, the United States officially rejoined the landmark Paris Agreement on February 19, 2021, positioning the country to once again be part of the global climate solution. Meanwhile, city, state, business, and civic leaders across the country and around the world have been ramping up efforts to drive the clean energy advances needed to meet the goals of the agreement and put the brakes on dangerous climate change.

2.7.2 NATIONAL

Prior to the last decade, there have been no concrete federal regulations of GHGs or major planning for climate change adaptation. The following are actions regarding the federal government, GHGs, and fuel efficiency.

GHG ENDANGERMENT

In *Massachusetts v. Environmental Protection Agency* 549 U.S. 497 (2007), decided on April 2, 2007, the United States Supreme Court (Supreme Court) found that four GHGs, including CO_2, are air pollutants subject to regulation under Section 202(a)(1) of the Clean Air Act (CAA). The Supreme Court held that the EPA Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned

decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the CAA:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs— CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section "Clean Vehicles" below. After a lengthy legal challenge, the Supreme Court declined to review an Appeals Court ruling that upheld the EPA Administrator's findings (32).

CLEAN VEHICLES

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the U.S. On April 1, 2010, the EPA, and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the U.S.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty (MD) passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon (mpg) if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards would cut CO_2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the NHTSA issued final rules on a second-phase joint rulemaking establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012. The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and MD passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 mpg if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks (HDT) and buses on September 15, 2011, effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20% reduction in CO_2 emissions and fuel consumption by the 2018 model year. For HDT and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10% reduction for gasoline vehicles and a 15% reduction for diesel vehicles by the 2018 model year (12 and 17% respectively if

accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10% reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

On April 2, 2018, the EPA signed the Mid-term Evaluation Final Determination, which declared that the MY 2022-2025 GHG standards are not appropriate and should be revised (33). This Final Determination serves to initiate a notice to further consider appropriate standards for MY 2022-2025 light-duty vehicles. On August 2, 2018, the NHTSA in conjunction with the EPA, released a notice of proposed rulemaking, the *Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks* (SAFE Vehicles Rule). The SAFE Vehicles Rule was proposed to amend exiting Corporate Average Fuel Economy (CAFE) and tailpipe CO_2 standards for passenger cars and light trucks and to establish new standards covering model years 2021 through 2026. As of March 31, 2020, the NHTSA and EPA finalized the SAFE Vehicle Rule which increased stringency of CAFE and CO_2 emissions standards by 1.5% each year through model year 2026 (34).

MANDATORY REPORTING OF GHGS

The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of GHGs Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the U.S. and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons per year (MT/yr) or more of GHG emissions are required to submit annual reports to the EPA.

NEW SOURCE REVIEW

The EPA issued a final rule on May 13, 2010, that establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these CAA permitting programs to limit which facilities would be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the Federal Code of Regulations, the EPA states:

> *"This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the CAA, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to GHG sources, starting with the largest GHG emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources but excludes certain smaller sources from Prevention of Significant*

Deterioration and Title V permitting for GHG emissions until at least April 30, 2016."

The EPA estimates that facilities responsible for nearly 70% of the national GHG emissions from stationary sources would be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

STANDARDS OF PERFORMANCE FOR GHG EMISSIONS FOR NEW STATIONARY SOURCES: ELECTRIC UTILITY GENERATING UNITS

As required by a settlement agreement, the EPA proposed new performance standards for emissions of CO_2 for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatts (MW) would be required to meet an output-based standard of 1,000 pounds (lbs) of CO_2 per MW-hour (MWh), based on the performance of widely used natural gas combined cycle technology. It should be noted that on February 9, 2016, the Supreme Court issued a stay of this regulation pending litigation. Additionally, the current EPA Administrator has also signed a measure to repeal the Clean Power Plan, including the CO_2 standards. The Clean Power Plan was officially repealed on June 19, 2019, when the EPA issued the final Affordable Clean Energy rule (ACE). Under ACE, new state emission guidelines were established that provided existing coal-fired electric utility generating units with achievable standards.

CAP-AND-TRADE

Cap-and-trade refers to a policy tool where emissions are limited to a certain amount and can be traded or provides flexibility on how the emitter can comply. Successful examples in the U.S. include the Acid Rain Program and the N_2O Budget Trading Program and Clean Air Interstate Rule in the northeast. There is no federal GHG cap-and-trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap-and-trade.

The Regional GHG Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps CO_2 emissions from power plants, auctions CO_2 emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008 and in 2020 has retained all participating states.

The Western Climate Initiative (WCI) partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15% below 2005 levels by 2020. The partners were originally California, British Columbia, Manitoba, Ontario, and Quebec. However, Manitoba and Ontario are not currently participating. California linked with Quebec's cap-and-trade system January 1, 2014, and joint offset auctions took place in 2015. While the WCI has yet to publish whether it has successfully reached the 2020 emissions goal initiative set in 2007, SB 32 requires that California, a major partner in the WCI, adopt the goal of reducing statewide GHG emissions to 40% below the 1990 level by 2030.

SMARTWAY PROGRAM

The SmartWay Program is a public-private initiative between the EPA, large and small trucking companies, rail carriers, logistics companies, commercial manufacturers, retailers, and other federal and state agencies. Its purpose is to improve fuel efficiency and the environmental performance (reduction of both GHG emissions and air pollution) of the goods movement supply chains. SmartWay is comprised of four components (35):

1. SmartWay Transport Partnership: A partnership in which freight carriers and shippers commit to benchmark operations, track fuel consumption, and improve performance annually.
2. SmartWay Technology Program: A testing, verification, and designation program to help freight companies identify equipment, technologies, and strategies that save fuel and lower emissions.
3. SmartWay Vehicles: A program that ranks light-duty cars and small trucks and identifies superior environmental performers with the SmartWay logo.
4. SmartWay International Interests: Guidance and resources for countries seeking to develop freight sustainability programs modeled after SmartWay.

SmartWay effectively refers to requirements geared towards reducing fuel consumption. Most large trucking fleets driving newer vehicles are compliant with SmartWay design requirements. Moreover, over time, all HDTs would have to comply with the CARB GHG Regulation that is designed with the SmartWay Program in mind, to reduce GHG emissions by making them more fuel-efficient. For instance, in 2015, 53 foot or longer dry vans or refrigerated trailers equipped with a combination of SmartWay-verified low-rolling resistance tires and SmartWay-verified aerodynamic devices would obtain a total of 10% or more fuel savings over traditional trailers.

Through the SmartWay Technology Program, the EPA has evaluated the fuel saving benefits of various devices through grants, cooperative agreements, emissions, and fuel economy testing, demonstration projects and technical literature review. As a result, the EPA has determined the following types of technologies provide fuel saving and/or emission reducing benefits when used properly in their designed applications, and has verified certain products:

- Idle reduction technologies – less idling of the engine when it is not needed would reduce fuel consumption.
- Aerodynamic technologies minimize drag and improve airflow over the entire tractor-trailer vehicle. Aerodynamic technologies include gap fairings that reduce turbulence between the tractor and trailer, side skirts that minimize wind under the trailer, and rear fairings that reduce turbulence and pressure drop at the rear of the trailer.
- Low rolling resistance tires can roll longer without slowing down, thereby reducing the amount of fuel used. Rolling resistance (or rolling friction or rolling drag) is the force resisting the motion when a tire rolls on a surface. The wheel would eventually slow down because of this resistance.
- Retrofit technologies include things such as diesel particulate filters, emissions upgrades (to a higher tier), etc., which would reduce emissions.
- Federal excise tax exemptions.

EXECUTIVE ORDER 13990

On January 20, 2021, Federal agencies were directed to immediately review, and take action to address, Federal regulations promulgated and other actions taken during the last 4 years that conflict with national objectives to improve public health and the environment; ensure access to clean air and water; limit exposure to dangerous chemicals and pesticides; hold polluters accountable, including those who disproportionately harm communities of color and low-income communities; reduce greenhouse gas emissions; bolster resilience to the impacts of climate change; restore and expand our national treasures and monuments; and prioritize both environmental justice and employment.

2.7.3 CALIFORNIA

2.7.3.1 LEGISLATIVE ACTIONS TO REDUCE GHGS

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark AB 32 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

AB 32

The California State Legislature enacted AB 32, which required that GHGs emitted in California be reduced to 1990 levels by the year 2020 (this goal has been met[4]). GHGs as defined under AB 32 include CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. Since AB 32 was enacted, a seventh chemical, NF_3, has also been added to the list of GHGs. CARB is the state agency charged with monitoring and regulating sources of GHGs. Pursuant to AB 32, CARB adopted regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 states the following:

> *"Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems."*

SB 375

On September 30, 2008, SB 375 was signed by Governor Schwarzenegger. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40% of the total

[4] Based upon the 2019 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2017 GHG emissions period, California emitted an average 424.1 $MMTCO_2e$ (29). This is less than the 2020 emissions target of 431 $MMTCO_2e$.

GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California would not be able to achieve the goals of AB 32." SB 375 does the following: it (1) requires metropolitan planning organizations (MPOs) to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

SB 375 requires MPOs to prepare a Sustainable Communities Strategy (SCS) within the Regional Transportation Plan (RTP) that guides growth while taking into account the transportation, housing, environmental, and economic needs of the region. SB 375 uses CEQA streamlining as an incentive to encourage residential projects, which help achieve AB 32 goals to reduce GHG emissions. Although SB 375 does not prevent CARB from adopting additional regulations, such actions are not anticipated in the foreseeable future.

Concerning CEQA, SB 375, as codified in Public Resources Code Section 21159.28, states that CEQA findings for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts, or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network, if the project:

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that CARB accepts as achieving the GHG emission reduction targets.
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies).
3. Incorporates the MMs required by an applicable prior environmental document.

AB 1493 - Pavley Fuel Efficiency Standards

Enacted on July 22, 2002, California AB 1493, also known as the Pavley Fuel Efficiency Standards, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the U.S. District Court for the District of Columbia in 2011.

The standards phase in during the 2009 through 2016 MY. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program (LEV III) or the Advanced Clean Cars (ACC) program. The ACC program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for MY 2017 through 2025. The regulation would reduce GHGs from new cars by 34% from 2016 levels by 2025. The new rules would clean up gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles (EV) and hydrogen fuel

cell cars. The package would also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.

CLEAN ENERGY AND POLLUTION REDUCTION ACT OF 2015 (SB 350)

In October 2015, the legislature approved, and Governor Jerry Brown signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for EV charging stations. Provisions for a 50% reduction in the use of petroleum statewide were removed from the Bill because of opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 25% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target would be achieved through the California Public Utilities Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which would facilitate the growth of renewable energy markets in the western United States.

SB 32

On September 8, 2016, Governor Brown signed SB 32 and its companion bill, AB 197. SB 32 requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80% below 1990 levels by 2050. AB 197 creates a legislative committee to oversee regulators to ensure that CARB not only responds to the Governor, but also the Legislature (11).

CARB SCOPING PLAN UPDATE

In November 2017, CARB released the *Final 2017 Scoping Plan Update* (*2017 Scoping Plan*), which identifies the State's post-2020 reduction strategy. The *2017 Scoping Plan* reflects the 2030 target of a 40% reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Key programs that the proposed Second Update builds upon include the Cap-and-Trade Regulation, the LCFS, and much cleaner cars, trucks, and freight movement, utilizing cleaner, renewable energy, and strategies to reduce CH_4 emissions from agricultural and other wastes.

The *2017 Scoping Plan* establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40% decrease in 1990 levels by 2030 (36).

California's climate strategy would require contributions from all sectors of the economy, including the land base, and would include enhanced focus on zero and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation

and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (CH_4, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for direct GHG reductions at refineries would further support air quality co-benefits in neighborhoods, including in disadvantaged communities historically located adjacent to these large stationary sources, as well as efforts with California's local air pollution control and air quality management districts (air districts) to tighten emission limits on a broad spectrum of industrial sources. Major elements of the *2017 Scoping Plan* framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing zero-emission vehicles (ZEV) buses and trucks.
- LCFS, with an increased stringency (18% by 2030).
- Implementing SB 350, which expands the RPS to 50% RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing CH_4 and HCF emissions by 40% and anthropogenic black carbon emissions by 50% by year 2030.
- Continued implementation of SB 375.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- 20% reduction in GHG emissions from refineries by 2030.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Note, however, that the *2017 Scoping Plan* acknowledges that:

> *"[a]chieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA."*

In addition to the statewide strategies listed above, the *2017 Scoping Plan* also identifies local governments as essential partners in achieving the State's long-term GHG reduction goals and identifies local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends that local governments achieve a community-wide goal to achieve emissions of no more than 6 metric tons of CO_2e ($MTCO_2e$) or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidence-based bright-line numeric thresholds—consistent with the *2017 Scoping Plan* and the State's long-term GHG goals—and projects with emissions over that amount may be required to incorporate on-site design features and MMs that avoid or minimize project emissions to the degree feasible; or a performance-based metric using a CAP or other plan to reduce GHG emissions is appropriate.

According to research conducted by the Lawrence Berkeley National Laboratory (LBNL) and supported by CARB, California, under its existing and proposed GHG reduction policies, could achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California LBNL GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that by 2030, emissions could range from 211 to 428 $MTCO_2e$ per year ($MTCO_2e$/yr), indicating that "even if all modeled policies are not implemented, reductions could be sufficient to reduce emissions 40% below the 1990 level [of SB 32]." CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Although the research indicated that the emissions would not meet the State's 80% reduction goal by 2050, various combinations of policies could allow California's cumulative emissions to remain very low through 2050 (37) (38).

CAP-AND-TRADE PROGRAM

The *2017 Scoping Plan* identifies a Cap-and-Trade Program as one of the key strategies for California to reduce GHG emissions. According to CARB, a cap-and-trade program would help put California on the path to meet its goal of achieving a 40% reduction in GHG emissions from 1990 levels by 2030. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap would be able to trade permits to emit GHGs within the overall limit.

CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. The Cap-and-Trade Program is designed to reduce GHG emissions from regulated entities by more than 16% between 2013 and 2020, and by an additional 40% by 2030. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and would decline over time, achieving GHG emission reductions throughout the program's duration.

Covered entities that emit more than 25,000 $MTCO_2e$/yr must comply with the Cap-and-Trade Program. Triggering of the 25,000 $MTCO_2e$/yr "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of GHG Emissions (Mandatory Reporting Rule or "MRR").

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities are allocated free allowances in whole or part (if eligible), and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender "compliance instruments" for each $MTCO_2e$ of GHG they emit. There also are requirements to surrender compliance instruments covering 30% of the prior year's compliance obligation by November of each year (39).

The Cap-and-Trade Program provides a firm cap, which provides the highest certainty of achieving the 2030 target. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather,

GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by CARB in the *First Update to the Climate Change Scoping Plan*:

> *"The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative."* (40)

The Cap-and-Trade Program covers approximately 80% of California's GHG emissions (36). The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period. The Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported.

2.7.3.2 EXECUTIVE ORDERS RELATED TO GHG EMISSIONS

California's Executive Branch has taken several actions to reduce GHGs through the use of Executive Orders. Although not regulatory, they set the tone for the state and guide the actions of state agencies.

EXECUTIVE ORDER S-3-05

California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80% below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that would stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

EXECUTIVE ORDER S-01-07 (LCFS)

Governor Schwarzenegger signed Executive Order S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020. CARB adopted the LCFS on April 23, 2009.

The LCFS was challenged in the U.S. District Court in Fresno in 2011. The court's ruling issued on December 29, 2011, included a preliminary injunction against CARB's implementation of the rule. The Ninth Circuit Court of Appeals stayed the injunction on April 23, 2012, pending final ruling on appeal, allowing CARB to continue to implement and enforce the regulation. The Ninth Circuit Court's decision, filed September 18, 2013, vacated the preliminary injunction. In essence, the court held that LCFS adopted by CARB were not in conflict with federal law. On August 8, 2013, the Fifth District Court of Appeal (California) ruled CARB failed to comply with CEQA and the Administrative Procedure Act (APA) when adopting regulations for LCFS. In a partially published opinion, the Court of Appeal reversed the trial court's judgment and directed issuance of a writ of mandate setting aside Resolution 09-31 and two executive orders of CARB approving LCFS regulations promulgated to reduce GHG emissions. However, the court tailored its remedy to protect the public interest by allowing the LCFS regulations to remain operative while CARB complies with the procedural requirements it failed to satisfy.

To address the Court ruling, CARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon intensity fuels, offer additional flexibility to regulated parties, update critical technical information, simplify, and streamline program operations, and enhance enforcement. On November 16, 2015, the Office of Administrative Law (OAL) approved the Final Rulemaking Package. The new LCFS regulation became effective on January 1, 2016.

In 2018, CARB approved amendments to the regulation, which included strengthening the carbon intensity benchmarks through 2030 in compliance with the SB 32 GHG emissions reduction target for 2030. The amendments included crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector (41).

EXECUTIVE ORDER S-13-08

Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the Order, the *2009 California Climate Adaptation Strategy* (*CNRA 2009*) was adopted, which is the "…first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying, and exploring strategies to adapt to climate change, and specifying a direction for future research.

EXECUTIVE ORDER B-30-15

On April 29, 2015, Governor Brown issued an executive order to establish a California GHG reduction target of 40% below 1990 levels by 2030. The Governor's executive order aligned California's GHG reduction targets with those of leading international governments ahead of the U.N. Climate Change Conference in Paris late 2015. The Order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40% below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80% below 1990 levels by 2050 and directs CARB to update the *2017 Scoping Plan* to express the 2030 target in terms of $MMTCO_2e$. The Order also requires the state's climate adaptation plan to be updated every three years, and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this Order is not legally enforceable as to local governments and the private sector. Legislation that would update AB 32 to make post 2020 targets and requirements a mandate is in process in the State Legislature.

EXECUTIVE ORDER B-55-18 AND SB 100

SB 100 and Executive Order B-55-18 were signed by Governor Brown on September 10, 2018. Under the existing RPS, 25% of retail sales of electricity are required to be from renewable sources by December 31, 2016, 33% by December 31, 2020, 40% by December 31, 2024, 45% by December 31, 2027, and 50% by December 31, 2030. SB 100 raises California's RPS requirement to 50% renewable resources target by December 31, 2026, and to achieve a 60% target by December 31, 2030. SB 100 also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours (kWh) of those products sold to their retail end-use customers achieve 44% of retail sales by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. In addition to targets under AB 32 and SB 32, Executive Order B-55-18 establishes a carbon neutrality goal for the state of California by 2045; and sets a goal to maintain net negative emissions thereafter. The Executive Order directs the California Natural Resources Agency (CNRA), California EPA (CalEPA), the California Department of Food and Agriculture (CDFA), and CARB to include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal.

2.7.3.3 CALIFORNIA REGULATIONS AND BUILDING CODES

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

TITLE 20 CCR SECTIONS 1601 ET SEQ. – APPLIANCE EFFICIENCY REGULATIONS

The Appliance Efficiency Regulations regulate the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. 23 categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state

and those designed and sold exclusively for use in recreational vehicles (RV) or other mobile equipment (CEC 2012).

TITLE 24 CCR PART 6 – CALIFORNIA ENERGY CODE

The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods.

TITLE 24 CCR PART 11 – CALIFORNIA GREEN BUILDING STANDARDS CODE

The California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2009, and is administered by the California Building Standards Commission (CBSC).

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2019 California Green Building Code Standards that became effective January 1, 2020.

Local jurisdictions are permitted to adopt more stringent requirements, as state law provides methods for local enhancements. CALGreen recognizes that many jurisdictions have developed existing construction waste and demolition ordinances and defers to them as the ruling guidance provided they establish a minimum 65% diversion requirement.

The code also provides exemptions for areas not served by construction waste and demolition recycling infrastructure. The State Building Code provides the minimum standard that buildings must meet in order to be certified for occupancy, which is generally enforced by the local building official.

Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas (GHG) emissions. The 2019 version of Title 24 was adopted by the CEC and became effective on January 1, 2020.

The 2019 Title 24 standards would result in less energy use, thereby reducing air pollutant emissions associated with energy consumption in the SCAB and across the State of California. For example, the 2019 Title 24 standards would require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, and update indoor and outdoor lighting requirements for nonresidential buildings.

The CEC anticipates that single-family homes built with the 2019 standards would use approximately 7% less energy compared to the residential homes built under the 2016 standards. Additionally, after implementation of solar photovoltaic systems, homes built under the 2019 standards would use about 53% less energy than homes built under the 2016 standards. Nonresidential buildings (such as the Project) would use approximately 30% less energy due to lighting upgrade requirements (19).

Because the Project would be constructed after January 1, 2020, the 2019 CALGreen standards are applicable to the Project and require, among other items (20):

NONRESIDENTIAL MANDATORY MEASURES

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- Electric vehicle (EV) charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3).
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).

- Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
- Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).

- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

CARB REFRIGERANT MANAGEMENT PROGRAM

CARB adopted a regulation in 2009 to reduce refrigerant GHG emissions from stationary sources through refrigerant leak detection and monitoring, leak repair, system retirement and retrofitting, reporting and recordkeeping, and proper refrigerant cylinder use, sale, and disposal. The regulation is set forth in sections 95380 to 95398 of Title 17, CCR. The rules implementing the regulation establish a limit on statewide GHG emissions from stationary facilities with refrigeration systems with more than 50 pounds of a high GWP refrigerant. The refrigerant management program is designed to (1) reduce emissions of high-GWP GHG refrigerants from leaky stationary, non-residential refrigeration equipment; (2) reduce emissions from the installation and servicing of refrigeration and air-conditioning appliances using high-GWP refrigerants; and (3) verify GHG emission reductions.

TRACTOR-TRAILER GHG REGULATION

The tractors and trailers subject to this regulation must either use EPA SmartWay certified tractors and trailers or retrofit their existing fleet with SmartWay verified technologies. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the HD tractors that pull them on California

highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low rolling resistance tires. Sleeper cab tractors MY 2011 and later must be SmartWay certified. All other tractors must use SmartWay verified low rolling resistance tires. There are also requirements for trailers to have low rolling resistance tires and aerodynamic devices.

PHASE I AND 2 HEAVY-DUTY VEHICLE GHG STANDARDS

In September 2011, CARB has adopted a regulation for GHG emissions from HDTs and engines sold in California. It establishes GHG emission limits on truck and engine manufacturers and harmonizes with the EPA rule for new trucks and engines nationally. Existing HD vehicle regulations in California include engine criteria emission standards, tractor-trailer GHG requirements to implement SmartWay strategies (i.e., the Heavy-Duty Tractor-Trailer GHG Regulation), and in-use fleet retrofit requirements such as the Truck and Bus Regulation. The EPA rule has compliance requirements for new compression and spark ignition engines, as well as trucks from Class 2b through Class 8. Compliance requirements began with MY 2014 with stringency levels increasing through MY 2018. The rule organizes truck compliance into three groupings, which include a) HD pickups and vans; b) vocational vehicles; and c) combination tractors. The EPA rule does not regulate trailers.

CARB staff has worked jointly with the EPA and the NHTSA on the next phase of federal GHG emission standards for medium-duty trucks (MDT) and HDT vehicles, called federal Phase 2. The federal Phase 2 standards were built on the improvements in engine and vehicle efficiency required by the Phase 1 emission standards and represent a significant opportunity to achieve further GHG reductions for 2018 and later MY HDT vehicles, including trailers. The EPA and NHTSA have proposed to roll back GHG and fuel economy standards for cars and light-duty trucks, which suggests a similar rollback of Phase 2 standards for MDT and HDT vehicles may be pursued.

SB 97 AND THE CEQA GUIDELINES UPDATE

Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states "(a) On or before July 1, 2009, the Office of Planning and Research (OPR) shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the OPR pursuant to subdivision (a)."

In 2012, Public Resources Code Section 21083.05 was amended to state:

> *"The Office of Planning and Research and the Natural Resources Agency shall periodically update the guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption, to incorporate new information or criteria established by the State Air Resources Board pursuant to Division 25.5 (commencing with Section 38500) of the Health and Safety Code."*

On December 28, 2018, the Natural Resources Agency announced the OAL approved the amendments to the *CEQA Guidelines* for implementing CEQA. The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing *CEQA Guidelines* to reference climate change.

Section 15064.4 was added the *CEQA Guidelines* and states that in determining the significance of a project's GHG emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively insignificant compared to statewide, national, or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. Additionally, a lead agency may use a model or methodology to estimate GHG emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use (42).

2.7.4 REGIONAL

The project is within the SCAB, which is under the jurisdiction of the SCAQMD.

SCAQMD

SCAQMD is the agency responsible for air quality planning and regulation in the SCAB. The SCAQMD addresses the impacts to climate change of projects subject to SCAQMD permit as a lead agency if they are the only agency having discretionary approval for the project and acts as a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions.

In 2008, SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the SCAB. The Working Group developed several different options that are contained in the SCAQMD Draft Guidance Document – Interim CEQA GHG Significance Threshold, which could be applied by lead agencies. The working group has not provided additional guidance since release of the interim guidance in 2008. The SCAQMD Board has not approved the thresholds; however, the Guidance Document provides substantial evidence supporting the approaches to significance of GHG emissions that can be considered by the lead agency in adopting its own threshold. The current interim thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.

- Tier 2 consists of determining whether the project is consistent with a GHG reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to the project's operational emissions. If a project's emissions are below one of the following screening thresholds, then the project is less than significant:
    - Residential and commercial land use: 3,000 $MTCO_2e$/yr
    - Industrial land use: 10,000 $MTCO_2e$/yr
    - Based on land use type: residential: 3,500 $MTCO_2e$/yr; commercial: 1,400 $MTCO_2e$/yr; or mixed use: 3,000 $MTCO_2e$/yr
- Tier 4 has the following options:
    - Option 1: Reduce Business-as-Usual (BAU) emissions by a certain percentage; this percentage is currently undefined.
    - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
    - Option 3: 2020 target for service populations (SP), which includes residents and employees: 4.8 $MTCO_2e$ per SP per year for projects and 6.6 $MTCO_2e$ per SP per year for plans;
    - Option 3, 2035 target: 3.0 $MTCO_2e$ per SP per year for projects and 4.1 $MTCO_2e$ per SP per year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD's interim thresholds used the Executive Order S-3-05-year 2050 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap CO_2 concentrations at 450 ppm, thus stabilizing global climate.

SCAQMD only has authority over GHG emissions from development projects that include air quality permits. At this time, it is unknown if the project would include stationary sources of emissions subject to SCAQMD permits. Notwithstanding, if the Project requires a stationary permit, it would be subject to the applicable SCAQMD regulations.

SCAQMD Regulation XXVII, adopted in 2009 includes the following rules:

- Rule 2700 defines terms and post global warming potentials.
- Rule 2701, SoCal Climate Solutions Exchange, establishes a voluntary program to encourage, quantify, and certify voluntary, high quality certified GHG emission reductions in the SCAQMD.
- Rule 2702, GHG Reduction Program created a program to produce GHG emission reductions within the SCAQMD. The SCAQMD would fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

SCAQMD is the agency responsible for air quality planning and regulation in the SCAB. The SCAQMD addresses the impacts to climate change of projects subject to SCAQMD permit as a lead agency if they are the only agency having discretionary approval for the project and acts as

a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions.

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3 PROJECT GHG IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will result in a significant GHG impact. The significance of these potential impacts is described in the following sections.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related GHG impacts are taken from the Initial Study Checklist in Appendix G of the State *CEQA Guidelines* (14 CCR of Regulations §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to GHG if it would (1):

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

3.3 MODELS EMPLOYED TO ANALYZE GHGS

3.3.1 CALIFORNIA EMISSIONS ESTIMATOR MODEL (CALEEMOD)

In May 2021, the SCAQMD, in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the CalEEMod Version 2020.4.0. The purpose of this model is to calculate construction-source and operational-source criteria pollutants and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (43). Accordingly, the latest version of CalEEMod has been used for this Project to determine GHG emissions. Output from the model runs for construction and operational activity are provided in Appendices 3.1 through 3.2. CalEEMod includes GHG emissions from the following source categories: construction, area, energy, mobile, waste, water.

3.4 LIFE-CYCLE ANALYSIS NOT REQUIRED

A full life-cycle analysis (LCA) for construction and operational activity is not included in this analysis due to the lack of consensus guidance on LCA methodology at this time (44). Life-cycle analysis (i.e., assessing economy-wide GHG emissions from the processes in manufacturing and transporting all raw materials used in the Project development, infrastructure, and on-going operations) depends on emission factors or econometric factors that are not well established for all processes. At this time, an LCA would be extremely speculative and thus has not been prepared.

Additionally, the SCAQMD recommends analyzing direct and indirect project GHG emissions generated within California and not life-cycle emissions because the life-cycle effects from a project could occur outside of California, might not be very well understood, or documented, and

would be challenging to mitigate (45). Additionally, the science to calculate life cycle emissions is not yet established or well defined; therefore, SCAQMD has not recommended, and is not requiring, life-cycle emissions analysis.

3.5 CONSTRUCTION EMISSIONS

Project construction actvities would generate CO_2 and CH_4 emissions The report *Durst Drive Warehouse Air Quality Impact Analysis Report* (AQIA) contains detailed information regarding Project construction activities (46). As discussed in the AQIA, Construction related emissions are expected from the following construction activities:

- Demolition
- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

3.5.1 CONSTRUCTION DURATION

Construction is anticipated to begin in July 2022 and will last through June 2023. The construction schedule utilized in the analysis, shown in Table 3-2, represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent[5]. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (47).

TABLE 3-2: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Demolition	07/01/2022	07/28/2022	20
Site Preparation	07/29/2022	08/11/2022	10
Grading	08/12/2022	09/08/2022	20
Building Construction	09/09/2022	06/15/2023	200
Paving	05/19/2023	06/15/2023	20
Architectural Coating	05/19/2023	06/15/2023	20

[5] As shown in the CalEEMod User's Guide Version 2020.4.0, Section 4.3 "OFFROAD Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

3.5.2 CONSTRUCTION EQUIPMENT

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 3-3 will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code.

TABLE 3-3: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment	Amount	Hours Per Day
Demolition	Excavators	2	8
	Skid Steer Loaders	1	8
Site Preparation	Crawler Tractors	4	8
	Rubber Tired Dozers	3	8
Grading	Crawler Tractors	3	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
Building Construction	Cranes	1	8
	Crawler Tractors	3	8
	Forklifts	3	8
	Generator Sets	1	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

3.5.3 CONSTRUCTION EMISSIONS SUMMARY

For construction phase Project emissions, GHGs are quantified and amortized over the life of the Project. To amortize the emissions over the life of the Project, the SCAQMD recommends calculating the total GHG emissions for the construction activities, dividing it by a 30-year Project life then adding that number to the annual operational phase GHG emissions (48). As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions. The amortized construction emissions are presented in Table 3-4.

TABLE 3-4: AMORTIZED ANNUAL CONSTRUCTION EMISSIONS

Year	Emissions (MT/yr)			
	CO_2	CH_4	N_2O	Total CO_2e[6]
2022	411.01	0.08	0.02	418.12
2023	388.31	0.07	0.01	393.16
Total GHG Emissions	799.32	0.15	0.03	811.29
Amortized Construction Emissions ($MTCO_2e$)	**26.64**	**4.94E-03**	**9.27E-04**	**27.04**

Source CalEEMod annual construction-source emissions are presented in Appendices 3.1 and 3.2.

3.6 OPERATIONAL EMISSIONS

Operational activities associated with the Project will result in emissions of CO_2, CH_4, and N_2O from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- On-Site Cargo Handling Equipment Emissions
- Water Supply, Treatment, and Distribution
- Solid Waste

3.6.1 AREA SOURCE EMISSIONS

LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. It should be noted that as October 9, 2021, Governor Gavin Newsom signed AB 1346. The bill aims to ban the sale of new gasoline-powered equipment under 25 gross horsepower (known as small off-road engines [SOREs]) by 2024. For purposes of analysis, the emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

3.6.2 ENERGY SOURCE EMISSIONS

COMBUSTION EMISSIONS ASSOCIATED WITH NATURAL GAS AND ELECTRICITY

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria

[6] CalEEMod reports the most common GHGs emitted which include CO_2, CH_4, and N_2O. These GHGs are then converted into the CO_2e by multiplying the individual GHG by the GWP.

pollutant emissions from offsite generation of electricity are generally excluded from the evaluation of significance and only natural gas use is considered. Based on information provided by the Project Applicant, the Project would not utilize natural gas and therefore no air quality emissions from energy sources would occur.

3.6.3 MOBILE SOURCE EMISSIONS

The Project related operational emissions derive primarily from vehicle trips generated by the Project, including employee trips to and from the site and truck trips associated with the proposed uses. Trips generated by the Project's proposed land uses have been estimated based on trip generation rates published by the Institute of Transportation Engineers (ITE) as provided in their *Trip Generation Manual*, *11th Edition* (2021) (49). For purposes of this analysis, the following ITE land use code and vehicle mix has been utilized:

- ITE land use code 154 (High-Cube Transload and Short-Term Storage Warehouse) has been used to derive site specific trip generation estimates for up to 347,918 sf. High cube transload/short-term storage warehouse data regarding the truck percentage and vehicle mix has been obtained from the ITE's *Trip Generation Manual Supplement* (dated February 2020). This study provides the following vehicle mix: AM Peak Hour: 80.0% passenger cars and 20.0% trucks; PM Peak Hour: 84.0% passenger cars and 16.0% trucks; Weekday Daily: 84.0% passenger cars and 16.0% trucks. The truck percentages were further broken down by axle type per the following SCAQMD recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.

APPROACH FOR ANALYSIS OF THE PROJECT

To determine emissions from passenger car vehicles, the CalEEMod defaults were utilized for trip length and trip purpose for the proposed industrial land uses.

This analysis assumes that passenger cars include Light-Duty-Auto vehicles (LDA), Light-Duty-Trucks (LDT1[7] & LDT2[8]), Medium-Duty-Vehicles (MDV), and Motorcycles (MCY) vehicle types. To account for emissions generated by passenger cars, the following fleet mix was utilized in this analysis:

TABLE 3-5: PASSENGER CAR FLEET MIX

Land Use	% Vehicle Type				
	LDA	LDT1	LDT2	MDV	MCY
High-Cube Transload Warehouse	57.81	6.00	18.53	14.94	2.72

Note: The Project-specific passenger car fleet mix used in this analysis is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, and MDV vehicle types.

[7] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[8] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

To determine emissions from trucks for the proposed industrial uses, the analysis incorporated the SCAQMD recommended truck trip length of 40 miles[9] and an assumption of 100% primary trips for the proposed industrial land uses.

Heavy trucks are broken down by truck type (or axle type) and are categorized as either Light-Heavy-Duty Trucks (LHDT1[10] & LHDT2 [11])/2-axle, Medium-Heavy-Duty Trucks (MHDT)/3-axle, and Heavy-Heavy-Duty Trucks (HHDT)/4+-axle. To account for emissions generated by trucks, the following fleet mix was utilized in this analysis:

TABLE 3-6: TRUCK FLEET MIX

Land Use	% Vehicle Type			
	LHDT1	LHDT2	MHDT	HHDT
High-Cube Transload Warehouse	13.73	3.66	19.57	63.04

Note: Project-specific truck fleet mix is based on the number of trips generated by each truck type (LHDT1, LHDT2, MHDT, and HHDT) relative to the total number of truck trips.

3.6.4 On-Site Cargo Handling Equipment Emissions

It is common for warehouse buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this particular Project, on-site modeled operational equipment includes up to one (1) 200 horsepower (hp), compressed natural gas or gasoline-powered tractors/loaders/backhoes operating at 4 hours a day[12] for 365 days of the year.

3.6.5 Water Supply, Treatment and Distribution

Indirect GHG emissions result from the production of electricity used to convey, treat, and distribute water and wastewater. The amount of electricity required to convey, treat, and distribute water depends on the volume of water as well as the sources of the water. Unless otherwise noted, CalEEMod default parameters were used.

3.6.6 Solid Waste

Industrial land uses will result in the generation and disposal of solid waste. A percentage of this waste will be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted will be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic

[9] The average trip length for heavy trucks were based on the SCAQMD documents for the implementation of the Facility-Based Mobile Source Measures (FBMSMs) adopted in the 2016 AQMP. SCAQMD's "Preliminary Warehouse Emission Calculations" cites 39.9-mile trip length for heavy-heavy trucks (41). As a conservative measure, a trip length of 40 miles has been utilized for all trucks for the purpose of this analysis (39)

[10] Vehicles under the LHDT1 category have a GVWR of 8,501 to 10,000 lbs.

[11] Vehicles under the LHDT2 category have a GVWR of 10,001 to 14,000 lbs.

[12] Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoe would operate up to 4 hours per day.

breakdown of material. GHG emissions associated with the disposal of solid waste associated with the proposed Project were calculated by CalEEMod using default parameters.

3.6.7 EMISSIONS SUMMARY

The annual GHG emissions associated with the Project are summarized in Table 3-7. As shown in Table 3-7, construction and operation of the Project would generate a total of 1,455.16 $MTCO_2e$/yr.

TABLE 3-7: PROJECT SCENARIO GHG EMISSIONS

Emission Source	Emissions (MT/yr)			
	CO_2	CH_4	N_2O	Total CO_2e
Annual construction-related emissions amortized over 30 years	26.64	4.94E-03	9.27E-04	27.04
Area Source	0.02	5.00E-05	0.00	0.02
Energy Source	108.47	7.73E-03	1.29E-03	109.04
Mobile Source	964.89	0.04	0.11	998.60
On-Site Equipment	50.75	0.02	0.00	51.16
Waste	38.80	2.29	0.00	96.13
Water Usage	123.51	1.54	0.04	173.16
Total CO_2e (All Sources)	**1,455.16**			

Source: CalEEMod output, See Appendices 3.1 and 3.2 for detailed model outputs.

3.7 GHG EMISSIONS FINDINGS AND RECOMMENDATIONS

3.7.1 GHG IMPACT 1

Potential to generate direct or indirect GHG emissions that would result in a significant impact on the environment.

A numerical threshold for determining the significance of GHG emissions in the SCAB has not been established by the SCAQMD for Projects where it is not the lead agency. As an interim threshold based on guidance provided in the CAPCOA *CEQA and Climate Change* handbook, the City has opted to use a non-zero threshold approach based on Approach 2 of the handbook. Threshold 2.5 (Unit-Based Thresholds Based on Market Capture) establishes a numerical threshold based on capture of approximately 90% of emissions from future development. The latest threshold developed by SCAQMD using this method is 3,000 $MTCO_2e$/yr for all projects (50).

The Project will result in approximately 1,455.16 $MTCO_2e$/yr. As such, the Project would not exceed the SCAQMD's numeric threshold of 3,000 $MTCO_2e$/yr if it were applied. Thus, the Project would not have the potential to result in a cumulatively considerable impact with respect to GHG emissions.

The Project would have the potential to generate direct or indirect GHG emissions that would result in a significant impact on the environment.

3.7.2 GHG IMPACT 2

The Project would have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

The Project's consistency with SB 32 (2017 Scoping Plan).

SB 32/2017 SCOPING PLAN CONSISTENCY

The *2017 Scoping Plan* Update reflects the 2030 target of a 40% reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Table 3-8 summarizes the Project's consistency with the *2017 Scoping Plan*. As summarized, the project will not conflict with any of the provisions of the *Scoping Plan* and in fact supports seven of the action categories.

TABLE 3-8: 2017 SCOPING PLAN CONSISTENCY SUMMARY[13]

Action	Responsible Parties	Consistency
Implement SB 350 by 2030		
Increase the Renewables Portfolio Standard to 50% of retail sales by 2030 and ensure grid reliability.	CPUC, CEC, CARB	Consistent. The Project would use energy from Southern California Edison (SCE). SCE has committed to diversify the portfolio of energy sources by increasing energy from wind and solar sources. The Project would not interfere with or obstruct SCE energy source diversification efforts.
Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.		Consistent. The Project would be constructed in compliance with current California Building Code requirements. Specifically, new buildings must achieve compliance with 2019 Building and Energy Efficiency Standards and the 2019 California Green Building Standards requirements. The proposed Project includes energy efficient field lighting and fixtures that meet the current Title 24 Standards throughout the Project Site and would be a modern development with energy efficient boilers, heaters, and air conditioning systems.
Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in Integrated Resource Planning (IRP) to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly- owned utilities meet GHG emissions reductions		

[13] Source California Air Resources Board, California's 2017 Climate Change Scoping Plan, November 2017 and CARB, Climate Change Scoping Plan, December 2008.

Action	Responsible Parties	Consistency
planning targets through a combination of measures as described in IRPs.		
Implement Mobile Source Strategy (Cleaner Technology and Fuels)		
At least 1.5 million zero emission and plug-in hybrid light-duty EVs by 2025.	CARB, California State Transportation Agency (CalSTA), Strategic Growth Council (SGC), California Department of Transportation (Caltrans), CEC, OPR, Local Agencies	Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB zero emission and plug-in hybrid light-duty EV 2025 targets. As this is a CARB enforced standard, vehicles that access the Project are required to comply with the standards and would therefore comply with the strategy.
At least 4.2 million zero emission and plug-in hybrid light-duty EVs by 2030.		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB zero emission and plug-in hybrid light-duty EV 2030 targets. As this is a CARB enforced standard, vehicles that access the Project are required to comply with the standards and would therefore comply with the strategy.
Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations.		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts to further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations. As this is a CARB enforced standard, vehicles that access the Project are required to comply with the standards and would therefore comply with the strategy.
Medium- and Heavy-Duty GHG Phase 2.		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts to implement Medium- and Heavy-Duty GHG Phase 2. As this is a CARB enforced standard, vehicles that access the Project are required to comply with the standards

Action	Responsible Parties	Consistency
		and would therefore comply with the strategy.
Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20% of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100% of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO_X standard.		Not applicable. This measure is not within the purview of this Project.
Last Mile Delivery: New regulation that would result in the use of low NO_X or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5% of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10% in 2025 and remaining flat through 2030.		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts to improve last mile delivery emissions.
Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."		Consistent. This Project would not obstruct or interfere with implementation of SB 375 and would therefore not conflict with this measure.
Increase stringency of SB 375 Sustainable Communities Strategy (2035 targets).	CARB	Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts to improve last mile delivery emissions.

Action	Responsible Parties	Consistency
Harmonize project performance with emissions reductions and increase competitiveness of transit and active transportation modes (e.g., via guideline documents, funding programs, project selection, etc.).	CalSTA, SGC, OPR, CARB, Governor's Office of Business and Economic Development (GO-Biz), California Infrastructure and Economic Development Bank (IBank), Department of Finance (DOF), California Transportation Commission (CTC), Caltrans	Consistent. Although this is directed towards CARB and Caltrans, the proposed Project would be designed to promote and support pedestrian activity on-site and in the Project Site area.
By 2019, develop pricing policies to support low-GHG transportation (e.g., low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).	CalSTA, Caltrans, CTC, OPR, SGC, CARB	Not applicable. This measure is not within the purview of this Project.
Implement California Sustainable Freight Action Plan		
Improve freight system efficiency.	CalSTA, CalEPA, CNRA, CARB, Caltrans, CEC, GO-Biz	Consistent. This measure would apply to all trucks accessing the Project site, this may include existing trucks or new trucks that are part of the statewide goods movement sector.
Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.		Not applicable. This measure is not within the purview of this Project.
Adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18%.	CARB	Consistent. When adopted, this measure would apply to all fuel purchased and used by the Project in the state. The Project would not obstruct or interfere with agency efforts to adopt a Low Carbon

Action	Responsible Parties	Consistency
		Fuel Standard with a Carbon Intensity reduction of 18%.
Implement the Short-Lived Climate Pollutant Strategy (SLPS) by 2030		
40% reduction in methane and hydrofluorocarbon emissions below 2013 levels.	CARB, CalRecycle, CDFA, California State Water Resource Control Board (SWRCB), Local Air Districts	Consistent. The Project would be required to comply with this measure and reduce any Project-source SLPS emissions accordingly. The Project would not obstruct or interfere agency efforts to reduce SLPS emissions.
50% reduction in black carbon emissions below 2013 levels.		Not applicable. This measure is not within the purview of this Project.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	CARB, CalRecycle, CDFA, SWRCB, Local Air Districts	Not applicable. This measure is not within the purview of this Project.
Implement the post-2020 Cap-and-Trade Program with declining annual caps.	CARB	Consistent. The Project would be required to comply with any applicable Cap-and-Trade Program provisions. The Project would not obstruct or interfere agency efforts to implement the post-2020 Cap-and-Trade Program.
By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California's land base as a net carbon sink		
Protect land from conversion through conservation easements and other incentives.	CNRA, Departments Within CDFA, CalEPA, CARB	Not applicable. This measure is not within the purview of this Project. However, the Project site is not an identified property that needs to be conserved.
Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity.		Consistent. The Project site is vacant disturbed property and does not comprise an area that would effectively provide for carbon sequestration. The Project would not obstruct or interfere agency efforts to increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity.

Action	Responsible Parties	Consistency
Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments.		Consistent. To the extent appropriate for the proposed industrial buildings, wood products would be used in construction, including for the roof structure. Additionally, the proposed Project includes landscaping.
Establish scenario projections to serve as the foundation for the Implementation Plan.		Not applicable. This measure is not within the purview of this Project.
Implement Forest Carbon Plan	CNRA, California Department of Forestry and Fire Protection (CAL FIRE), CalEPA and Departments Within	Not applicable. This measure is not within the purview of this Project.
Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.	State Agencies & Local Agencies	Not applicable. This measure is not within the purview of this Project.

As shown above, the Project would not conflict with any of the *2017 Scoping Plan* elements as any regulations adopted would apply directly or indirectly to the Project. Further, recent studies show that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40% below 1990 levels by 2030 (37).

The Project would not have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

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4 REFERENCES

1. **State of California.** *2020 CEQA California Environmental Quality Act.* 2020.
2. **Air Resources Board.** Assembly Bill 32: Global Warming Solutions Act. [Online] 2006. http://www.arb.ca.gov/cc/ab32/ab32.htm.
3. —. Sustainable Communities. [Online] 2008. http://www.arb.ca.gov/cc/sb375/sb375.htm.
4. —. Clean Car Standards - Pavley, Assembly Bill 1493. [Online] September 24, 2009. http://www.arb.ca.gov/cc/ccms/ccms.htm.
5. **Building Standards Commission.** California Building Standards Code (Title 24, California Code of Regulations). [Online] http://www.bsc.ca.gov/codes.aspx.
6. **California Energy Commission.** California Code of Regulations, TITLE 20, Division 2. [Online] September 3, 2013. http://www.energy.ca.gov/reports/title20/index.html.
7. **Air Resources Board.** Title 17 - California Code of Regulation. [Online] 2010. http://www.arb.ca.gov/regs/regs-17.htm.
8. **Department of Water Resources.** Updated Model Water Efficient Landscape Ordinance AB 1881. [Online] 2006. [Cited: November 13, 2013.] http://www.water.ca.gov/wateruseefficiency/landscapeordinance/updatedOrd_history.cfm.
9. **California Energy Commission.** SB 1368 Emission Performance Standards. [Online] September 29, 2006. http://www.energy.ca.gov/emission_standards/.
10. —. Renewables Portfolio Standard (RPS). [Online] 2002. http://www.energy.ca.gov/portfolio/.
11. **California Legislative Information.** Senate Bill No. 32. [Online] September 8, 2016. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32.
12. **City of Rialto.** *City of Rialto General Plan.* 2010.
13. **National Oceanic and Atmospheric Administration.** Greenhouse Gases - Water Vapor. *NOAA National Centers For Environmental Information.* [Online] https://www.ncdc.noaa.gov/monitoring-references/faq/greenhouse-gases.php?section=watervapor.
14. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report.* **International Panel on Climate Change.** 4, 2007.
15. *The Carbon Cycle and Climate Change.* **Bennington, Bret J.** 1, s.l. : Brooks/Cole. ISBN 1 3: 978-0-495-73855-8.
16. **The National Institute for Occupational Safety and Health.** Carbon Dioxide. *Centers for Disease Control and Prevention.* [Online] https://www.cdc.gov/niosh/npg/npgd0103.html.
17. **National Oceanic and Atmospheric Administration.** Greenhouse Gases - Methane. *NOAA National Centers for Environmental Information.* [Online] https://www.ncdc.noaa.gov/monitoring-references/faq/greenhouse-gases.php?section=methane.
18. **World Resources Institute.** Climate Analysis Indicator Tool (CAIT). [Online] http://cait.wri.org.
19. **National Oceanic and Atmospheric Administration.** Greenhouse Gases - Chlorofluorocarbons. *NOAA National Centers For Environmental Information.* [Online] https://www.ncdc.noaa.gov/monitoring-references/faq/greenhouse-gases.php?section=chlorofluorocarbons.
20. **United States Environmental Protection Agency.** Regulation for Reducting Sulfur Hexafluoride Emissions from Gas Insulated Switchgear. *Environmental Protection Agency.* [Online] May 7, 2014.

https://www.epa.gov/sites/production/files/2016-02/documents/mehl-arb-presentation-2014-wkshp.pdf.

21. **World Resources Institute.** Nitrogen Trifluoride Now Required in GHG Protocol Greenhouse Gas Emissions Inventory. [Online] May 22, 2013. https://www.wri.org/blog/2013/05/nitrogen-trifluoride-now-required-ghg-protocol-greenhouse-gas-emissions-inventories.
22. **National Center for Biotechnology Information.** Nitrogen Trifluoride. *PubChem Compound Database.* [Online] https://pubchem.ncbi.nlm.nih.gov/compound/24553 .
23. **American Lung Association.** Climate Change. [Online] http://www.lung.org/our-initiatives/healthy-air/outdoor/climate-change/.
24. **Barbara H. Allen-Diaz.** Climate change affects us all. *University of California Agriculture and Natural Resources.* [Online] April 1, 2009. http://calag.ucanr.edu/Archive/?article=ca.v063n02p51.
25. **Intergovernmental Panel on Climate Change.** Climate Change 2013 The Physical Science Basis - Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. *AR5 Climate Change 2013: The Physical Science Basis.* [Online] September 2013. https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_all_final.pdf.
26. **United Nations.** GHG Profiles - Annex I. [Online] http://di.unfccc.int/ghg_profile_annex1.
27. —. GHG Profiles - Non-Annex I. [Online] http://di.unfccc.int/ghg_profile_non_annex1.
28. **World Resources Institute.** Climate Analysis Indicator Tool (CAIT). [Online] http://cait.wri.org.
29. **Air Resources Board.** 2020 GHG Inventory. *California Greenhouse Gas Emission Inventory 2000-2019 Edition.* [Online] https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf.
30. **California Energy Commission.** *Our Changing Climate Assessing the Risks to California.* 2006.
31. **Center for Climate and Energy Solutions (C2ES).** Outcomes of the U.N. Climate Change Conference. *Center for Climate and Energy Solutions (C2ES).* [Online] 2015. http://www.c2es.org/international/negotiations/cop21-paris/summary.
32. **Agency, United States Environmental Protection.** Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Section 202(a) of the Clean Air Act. *United States Environmental Protection Agency.* [Online] 2020. https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean.
33. **Federal Register.** Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022-2025 Light-Duty Vehicles. [Online] 2018. https://www.federalregister.gov/documents/2018/04/13/2018-07364/mid-term-evaluation-of-greenhouse-gas-emissions-standards-for-model-year-2022-2025-light-duty.
34. **Administration, National Highway Traffic Safety.** SAFE: The Safer Affordable Fuel-Efficient 'SAFE' Vehicle Rule. *National Highway Traffic Safety Administration.* [Online] 2020. https://www.nhtsa.gov/corporate-average-fuel-economy/safe.
35. **United States Environmental Protection Agency.** SmartWay. [Online] 2017. https://www.epa.gov/smartway/learn-about-smartway.
36. **California Air Resources Board.** California's 2017 Climate Change Scoping Plan . [Online] 2017. https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017_es.pdf.
37. **Lawrence Berkeley National Laboratory.** California's Policies Can Significantly Cut Greenhouse Gas Emissions through 2030. *Lawrence Berkeley National Laboratory.* [Online] January 22, 2015.

http://newscenter.lbl.gov/2015/01/22/californias-policies-can-significantly-cut-greenhouse-gas-emissions-2030/.

38. **Ernest Orlando Lawrence Berkeley National Laboratory.** Modeling California policy impacts on greenhouse gas emissions. [Online] 2015. https://eaei.lbl.gov/sites/all/files/lbnl-7008e.pdf.
39. **California Air Resources Board.** Legal Disclaimer & User's Notice. [Online] April 2019. https://ww3.arb.ca.gov/cc/capandtrade/capandtrade/ct_reg_unofficial.pdf.
40. —. Climate Change Scoping Plan. [Online] 2014. https://ww3.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.
41. —. Low Carbon Fuel Standard. [Online] December 2019. https://ww3.arb.ca.gov/fuels/lcfs/lcfs.htm.
42. **Association of Environmental Professionals.** *2018 CEQA California Environmental Quality Act.* 2018.
43. **California Air Pollution Control Officers Association (CAPCOA).** California Emissions Estimator Model (CalEEMod). [Online] September 2016. www.caleemod.com.
44. **California Natural Resources Agency.** Final Statement of Reasons for Regulatory Action, Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97. [Online] December 2009.
45. *Minutes for the GHG CEQA Significance.* **South Coast Air Quality Managment District.** 2008.
46. **Urban Crossroads, Inc.** *Durst Drive Warehouse Air Quality Impact Analysis Report.* 2021.
47. **State of California.** *2019 CEQA California Environmental Quality Act.* 2019.
48. **South Coast Air Quality Management District.** *Greenhouse Gas CEQA Significance Threshold Stakeholder Working Group #13.* [Powerpoint] Diamond Bar : s.n., 2009.
49. **Institute of Transportation Engineers.** *Trip Generation Manual.* 11th Edition. 2021.
50. **South Coast Air Quality Management District.** BOARD MEETING DATE: December 5, 2008 Agenda No. 31. *South Coast Air Quality Management District.* [Online] December 5, 2008. http://www.aqmd.gov/hb/2008/December/081231a.htm .
51. **Air Resources Board.** 2019 GHG Inventory. *California Greenhouse Gas Emission Inventory 2000-2017 Edition.* [Online] [Cited: September 19, 2019.] http://www.arb.ca.gov/cc/inventory/data/data.htm.

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5 CERTIFICATIONS

The contents of this GHG study report represent an accurate depiction of the GHG impacts associated with the proposed Durst Drive Warehouse Project. The information contained in this GHG report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com.

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EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June, 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 3.1:

CALEEMOD CONSTRUCTION EMISSIONS MODEL OUTPUTS

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Durst Drive Warehouse (Construction - Unmitigated)

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	203.35	1000sqft	4.67	203,351.00	0
Parking Lot	183.00	Space	1.10	48,110.00	0
Other Asphalt Surfaces	145.08	1000sqft	3.33	145,079.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Project area is 9.10 acres

Construction Phase - Construction anticipated to begin July 2022 and end in June 2023

Off-road Equipment - Equipment based on consultation with Project Team

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment -

Off-road Equipment - Hours are based on an 8-hour workday

Grading - Analysis conservatively assumes that up to 10 acres can be disturbed per day

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition -

Trips and VMT - Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction

Architectural Coating - Rule 1113

Vehicle Trips - Construction run only

Energy Use - Construction run only

Water And Wastewater - Construction run only

Solid Waste - Construction run only

Construction Off-road Equipment Mitigation - Rule 403

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblConstructionPhase	NumDays	230.00	200.00
tblConstructionPhase	PhaseEndDate	9/21/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	7/27/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	8/24/2023	6/15/2023
tblConstructionPhase	PhaseStartDate	8/25/2023	5/19/2023
tblConstructionPhase	PhaseStartDate	7/28/2023	5/19/2023
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	LightingElect	1.17	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	0.33	0.00
tblEnergyUse	T24NG	1.98	0.00
tblGrading	AcresOfGrading	90.00	200.00
tblGrading	AcresOfGrading	35.00	100.00
tblGrading	MaterialExported	0.00	15,935.00
tblLandUse	LandUseSquareFeet	73,200.00	48,110.00
tblLandUse	LotAcreage	1.65	1.10

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	191.15	0.00
tblTripsAndVMT	HaulingTripLength	20.00	7.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	65.00	52.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CNW_TL	6.90	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	0.00
tblVehicleTrips	ST_TR	1.74	0.00
tblVehicleTrips	SU_TR	1.74	0.00
tblVehicleTrips	WD_TR	1.74	0.00
tblWater	IndoorWaterUseRate	47,024,687.50	0.00

2.0 Emissions Summary

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2186	2.2763	1.4722	4.5500e-003	0.4455	0.0872	0.5327	0.1335	0.0810	0.2145	0.0000	411.0112	411.0112	0.0777	0.0174	418.1252
2023	0.7084	1.8197	1.5873	4.3400e-003	0.1337	0.0739	0.2076	0.0360	0.0690	0.1049	0.0000	388.3094	388.3094	0.0704	0.0104	393.1641
Maximum	**0.7084**	**2.2763**	**1.5873**	**4.5500e-003**	**0.4455**	**0.0872**	**0.5327**	**0.1335**	**0.0810**	**0.2145**	**0.0000**	**411.0112**	**411.0112**	**0.0777**	**0.0174**	**418.1252**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2186	2.2763	1.4722	4.5500e-003	0.2408	0.0872	0.3279	0.0702	0.0810	0.1511	0.0000	411.0109	411.0109	0.0777	0.0174	418.1249
2023	0.7084	1.8197	1.5873	4.3400e-003	0.1337	0.0739	0.2076	0.0360	0.0690	0.1049	0.0000	388.3091	388.3091	0.0704	0.0104	393.1638
Maximum	**0.7084**	**2.2763**	**1.5873**	**4.5500e-003**	**0.2408**	**0.0872**	**0.3279**	**0.0702**	**0.0810**	**0.1511**	**0.0000**	**411.0109**	**411.0109**	**0.0777**	**0.0174**	**418.1249**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**35.35**	**0.00**	**27.66**	**37.38**	**0.00**	**19.84**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**7-1-2022**	**9-30-2022**	1.3054	1.3054
2	**10-1-2022**	**12-31-2022**	1.1890	1.1890
3	**1-1-2023**	**3-31-2023**	1.0216	1.0216
4	**4-1-2023**	**6-30-2023**	1.4992	1.4992
		Highest	1.4992	1.4992

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8449	6.0000e-005	6.7800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0132	0.0132	3.0000e-005	0.0000	0.0141
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.8449**	**6.0000e-005**	**6.7800e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0132**	**0.0132**	**3.0000e-005**	**0.0000**	**0.0141**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8449	6.0000e-005	6.7800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0132	0.0132	3.0000e-005	0.0000	0.0141
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.8449**	**6.0000e-005**	**6.7800e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0132**	**0.0132**	**3.0000e-005**	**0.0000**	**0.0141**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2022	7/28/2022	5	20	
2	Site Preparation	Site Preparation	7/29/2022	8/11/2022	5	10	
3	Grading	Grading	8/12/2022	9/8/2022	5	20	

4	Building Construction	Building Construction	9/9/2022	6/15/2023	5	200	
5	Paving	Paving	5/19/2023	6/15/2023	5	20	
6	Architectural Coating	Architectural Coating	5/19/2023	6/15/2023	5	20	

Acres of Grading (Site Preparation Phase): 100

Acres of Grading (Grading Phase): 200

Acres of Paving: 4.43

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 305,027; Non-Residential Outdoor: 101,676; Striped Parking Area: 11,591 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	8.00	78	0.48
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Demolition	Excavators	2	8.00	158	0.38
Grading	Excavators	0	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Welders	1	8.00	46	0.45
Demolition	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Grading	Crawler Tractors	3	8.00	212	0.43
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Crawler Tractors	3	8.00	212	0.43

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	5.00	232.00	14.70	6.90	7.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	5.00	1,992.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	167.00	52.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

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3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0251	0.0000	0.0251	3.8100e-003	0.0000	3.8100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7400e-003	0.0448	0.0789	1.2000e-004		2.0600e-003	2.0600e-003		1.9000e-003	1.9000e-003	0.0000	10.8827	10.8827	3.5200e-003	0.0000	10.9707
Total	**4.7400e-003**	**0.0448**	**0.0789**	**1.2000e-004**	**0.0251**	**2.0600e-003**	**0.0272**	**3.8100e-003**	**1.9000e-003**	**5.7100e-003**	**0.0000**	**10.8827**	**10.8827**	**3.5200e-003**	**0.0000**	**10.9707**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5000e-004	7.5100e-003	2.8300e-003	3.0000e-005	7.0000e-004	6.0000e-005	7.6000e-004	1.9000e-004	6.0000e-005	2.5000e-004	0.0000	2.6033	2.6033	1.1000e-004	4.1000e-004	2.7289
Vendor	9.0000e-005	2.3000e-003	8.2000e-004	1.0000e-005	3.2000e-004	3.0000e-005	3.4000e-004	9.0000e-005	2.0000e-005	1.2000e-004	0.0000	0.9079	0.9079	2.0000e-005	1.3000e-004	0.9486
Worker	3.0000e-004	2.4000e-004	2.8400e-003	1.0000e-005	8.8000e-004	0.0000	8.8000e-004	2.3000e-004	0.0000	2.4000e-004	0.0000	0.7036	0.7036	2.0000e-005	2.0000e-005	0.7102
Total	**6.4000e-004**	**0.0101**	**6.4900e-003**	**5.0000e-005**	**1.9000e-003**	**9.0000e-005**	**1.9800e-003**	**5.1000e-004**	**8.0000e-005**	**6.1000e-004**	**0.0000**	**4.2148**	**4.2148**	**1.5000e-004**	**5.6000e-004**	**4.3876**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.8100e-003	0.0000	9.8100e-003	1.4800e-003	0.0000	1.4800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7400e-003	0.0448	0.0789	1.2000e-004		2.0600e-003	2.0600e-003		1.9000e-003	1.9000e-003	0.0000	10.8827	10.8827	3.5200e-003	0.0000	10.9707
Total	**4.7400e-003**	**0.0448**	**0.0789**	**1.2000e-004**	**9.8100e-003**	**2.0600e-003**	**0.0119**	**1.4800e-003**	**1.9000e-003**	**3.3800e-003**	**0.0000**	**10.8827**	**10.8827**	**3.5200e-003**	**0.0000**	**10.9707**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5000e-004	7.5100e-003	2.8300e-003	3.0000e-005	7.0000e-004	6.0000e-005	7.6000e-004	1.9000e-004	6.0000e-005	2.5000e-004	0.0000	2.6033	2.6033	1.1000e-004	4.1000e-004	2.7289
Vendor	9.0000e-005	2.3000e-003	8.2000e-004	1.0000e-005	3.2000e-004	3.0000e-005	3.4000e-004	9.0000e-005	2.0000e-005	1.2000e-004	0.0000	0.9079	0.9079	2.0000e-005	1.3000e-004	0.9486
Worker	3.0000e-004	2.4000e-004	2.8400e-003	1.0000e-005	8.8000e-004	0.0000	8.8000e-004	2.3000e-004	0.0000	2.4000e-004	0.0000	0.7036	0.7036	2.0000e-005	2.0000e-005	0.7102
Total	**6.4000e-004**	**0.0101**	**6.4900e-003**	**5.0000e-005**	**1.9000e-003**	**9.0000e-005**	**1.9800e-003**	**5.1000e-004**	**8.0000e-005**	**6.1000e-004**	**0.0000**	**4.2148**	**4.2148**	**1.5000e-004**	**5.6000e-004**	**4.3876**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1434	0.0000	0.1434	0.0554	0.0000	0.0554	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0224	0.2517	0.0999	2.8000e-004		0.0108	0.0108		9.9200e-003	9.9200e-003	0.0000	24.9873	24.9873	8.0800e-003	0.0000	25.1894
Total	**0.0224**	**0.2517**	**0.0999**	**2.8000e-004**	**0.1434**	**0.0108**	**0.1541**	**0.0554**	**9.9200e-003**	**0.0653**	**0.0000**	**24.9873**	**24.9873**	**8.0800e-003**	**0.0000**	**25.1894**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	6.9000e-004	2.4000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	3.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.2724	0.2724	1.0000e-005	4.0000e-005	0.2846
Worker	3.4000e-004	2.7000e-004	3.1900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7916	0.7916	2.0000e-005	2.0000e-005	0.7989
Total	**3.7000e-004**	**9.6000e-004**	**3.4300e-003**	**1.0000e-005**	**1.0800e-003**	**2.0000e-005**	**1.0900e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**1.0640**	**1.0640**	**3.0000e-005**	**6.0000e-005**	**1.0835**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0559	0.0000	0.0559	0.0216	0.0000	0.0216	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0224	0.2517	0.0999	2.8000e-004		0.0108	0.0108		9.9200e-003	9.9200e-003	0.0000	24.9873	24.9873	8.0800e-003	0.0000	25.1893
Total	**0.0224**	**0.2517**	**0.0999**	**2.8000e-004**	**0.0559**	**0.0108**	**0.0667**	**0.0216**	**9.9200e-003**	**0.0315**	**0.0000**	**24.9873**	**24.9873**	**8.0800e-003**	**0.0000**	**25.1893**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	6.9000e-004	2.4000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	3.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.2724	0.2724	1.0000e-005	4.0000e-005	0.2846
Worker	3.4000e-004	2.7000e-004	3.1900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7916	0.7916	2.0000e-005	2.0000e-005	0.7989
Total	**3.7000e-004**	**9.6000e-004**	**3.4300e-003**	**1.0000e-005**	**1.0800e-003**	**2.0000e-005**	**1.0900e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**1.0640**	**1.0640**	**3.0000e-005**	**6.0000e-005**	**1.0835**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1672	0.0000	0.1672	0.0447	0.0000	0.0447	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0437	0.5000	0.2504	6.9000e-004		0.0197	0.0197		0.0181	0.0181	0.0000	60.7301	60.7301	0.0196	0.0000	61.2211
Total	**0.0437**	**0.5000**	**0.2504**	**6.9000e-004**	**0.1672**	**0.0197**	**0.1868**	**0.0447**	**0.0181**	**0.0628**	**0.0000**	**60.7301**	**60.7301**	**0.0196**	**0.0000**	**61.2211**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.7000e-003	0.1435	0.0358	5.9000e-004	0.0172	1.4300e-003	0.0186	4.7100e-003	1.3700e-003	6.0800e-003	0.0000	57.8877	57.8877	2.4700e-003	9.1700e-003	60.6833
Vendor	9.0000e-005	2.3000e-003	8.2000e-004	1.0000e-005	3.2000e-004	3.0000e-005	3.4000e-004	9.0000e-005	2.0000e-005	1.2000e-004	0.0000	0.9079	0.9079	2.0000e-005	1.3000e-004	0.9486
Worker	6.8000e-004	5.3000e-004	6.3900e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9800e-003	5.2000e-004	1.0000e-005	5.3000e-004	0.0000	1.5832	1.5832	5.0000e-005	5.0000e-005	1.5978
Total	**4.4700e-003**	**0.1463**	**0.0430**	**6.2000e-004**	**0.0194**	**1.4700e-003**	**0.0209**	**5.3200e-003**	**1.4000e-003**	**6.7300e-003**	**0.0000**	**60.3788**	**60.3788**	**2.5400e-003**	**9.3500e-003**	**63.2297**

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3.4 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0652	0.0000	0.0652	0.0174	0.0000	0.0174	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0437	0.5000	0.2504	6.9000e-004		0.0197	0.0197		0.0181	0.0181	0.0000	60.7300	60.7300	0.0196	0.0000	61.2211
Total	**0.0437**	**0.5000**	**0.2504**	**6.9000e-004**	**0.0652**	**0.0197**	**0.0849**	**0.0174**	**0.0181**	**0.0355**	**0.0000**	**60.7300**	**60.7300**	**0.0196**	**0.0000**	**61.2211**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.7000e-003	0.1435	0.0358	5.9000e-004	0.0172	1.4300e-003	0.0186	4.7100e-003	1.3700e-003	6.0800e-003	0.0000	57.8877	57.8877	2.4700e-003	9.1700e-003	60.6833
Vendor	9.0000e-005	2.3000e-003	8.2000e-004	1.0000e-005	3.2000e-004	3.0000e-005	3.4000e-004	9.0000e-005	2.0000e-005	1.2000e-004	0.0000	0.9079	0.9079	2.0000e-005	1.3000e-004	0.9486
Worker	6.8000e-004	5.3000e-004	6.3900e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9800e-003	5.2000e-004	1.0000e-005	5.3000e-004	0.0000	1.5832	1.5832	5.0000e-005	5.0000e-005	1.5978
Total	**4.4700e-003**	**0.1463**	**0.0430**	**6.2000e-004**	**0.0194**	**1.4700e-003**	**0.0209**	**5.3200e-003**	**1.4000e-003**	**6.7300e-003**	**0.0000**	**60.3788**	**60.3788**	**2.5400e-003**	**9.3500e-003**	**63.2297**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1133	1.2054	0.7156	1.7400e-003		0.0516	0.0516		0.0482	0.0482	0.0000	151.0250	151.0250	0.0410	0.0000	152.0494
Total	**0.1133**	**1.2054**	**0.7156**	**1.7400e-003**		**0.0516**	**0.0516**		**0.0482**	**0.0482**	**0.0000**	**151.0250**	**151.0250**	**0.0410**	**0.0000**	**152.0494**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5900e-003	0.0970	0.0344	3.9000e-004	0.0133	1.1000e-003	0.0144	3.8300e-003	1.0500e-003	4.8800e-003	0.0000	38.2416	38.2416	1.0300e-003	5.6600e-003	39.9550
Worker	0.0255	0.0200	0.2400	6.4000e-004	0.0742	4.0000e-004	0.0746	0.0197	3.7000e-004	0.0201	0.0000	59.4870	59.4870	1.6900e-003	1.7100e-003	60.0388
Total	**0.0291**	**0.1170**	**0.2744**	**1.0300e-003**	**0.0874**	**1.5000e-003**	**0.0889**	**0.0235**	**1.4200e-003**	**0.0249**	**0.0000**	**97.7285**	**97.7285**	**2.7200e-003**	**7.3700e-003**	**99.9938**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1133	1.2054	0.7156	1.7400e-003		0.0516	0.0516		0.0482	0.0482	0.0000	151.0248	151.0248	0.0410	0.0000	152.0492
Total	**0.1133**	**1.2054**	**0.7156**	**1.7400e-003**		**0.0516**	**0.0516**		**0.0482**	**0.0482**	**0.0000**	**151.0248**	**151.0248**	**0.0410**	**0.0000**	**152.0492**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5900e-003	0.0970	0.0344	3.9000e-004	0.0133	1.1000e-003	0.0144	3.8300e-003	1.0500e-003	4.8800e-003	0.0000	38.2416	38.2416	1.0300e-003	5.6600e-003	39.9550
Worker	0.0255	0.0200	0.2400	6.4000e-004	0.0742	4.0000e-004	0.0746	0.0197	3.7000e-004	0.0201	0.0000	59.4870	59.4870	1.6900e-003	1.7100e-003	60.0388
Total	**0.0291**	**0.1170**	**0.2744**	**1.0300e-003**	**0.0874**	**1.5000e-003**	**0.0889**	**0.0235**	**1.4200e-003**	**0.0249**	**0.0000**	**97.7285**	**97.7285**	**2.7200e-003**	**7.3700e-003**	**99.9938**

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3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1518	1.5592	1.0322	2.5600e-003		0.0665	0.0665		0.0620	0.0620	0.0000	221.7525	221.7525	0.0599	0.0000	223.2505
Total	**0.1518**	**1.5592**	**1.0322**	**2.5600e-003**		**0.0665**	**0.0665**		**0.0620**	**0.0620**	**0.0000**	**221.7525**	**221.7525**	**0.0599**	**0.0000**	**223.2505**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4900e-003	0.1142	0.0462	5.5000e-004	0.0195	8.2000e-004	0.0203	5.6300e-003	7.8000e-004	6.4100e-003	0.0000	53.9232	53.9232	1.4000e-003	7.9700e-003	56.3330
Worker	0.0346	0.0258	0.3233	9.2000e-004	0.1090	5.5000e-004	0.1095	0.0289	5.1000e-004	0.0294	0.0000	85.0921	85.0921	2.2300e-003	2.3100e-003	85.8359
Total	**0.0381**	**0.1400**	**0.3695**	**1.4700e-003**	**0.1285**	**1.3700e-003**	**0.1298**	**0.0346**	**1.2900e-003**	**0.0359**	**0.0000**	**139.0152**	**139.0152**	**3.6300e-003**	**0.0103**	**142.1689**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1518	1.5592	1.0322	2.5600e-003		0.0665	0.0665		0.0620	0.0620	0.0000	221.7522	221.7522	0.0599	0.0000	223.2502
Total	**0.1518**	**1.5592**	**1.0322**	**2.5600e-003**		**0.0665**	**0.0665**		**0.0620**	**0.0620**	**0.0000**	**221.7522**	**221.7522**	**0.0599**	**0.0000**	**223.2502**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4900e-003	0.1142	0.0462	5.5000e-004	0.0195	8.2000e-004	0.0203	5.6300e-003	7.8000e-004	6.4100e-003	0.0000	53.9232	53.9232	1.4000e-003	7.9700e-003	56.3330
Worker	0.0346	0.0258	0.3233	9.2000e-004	0.1090	5.5000e-004	0.1095	0.0289	5.1000e-004	0.0294	0.0000	85.0921	85.0921	2.2300e-003	2.3100e-003	85.8359
Total	**0.0381**	**0.1400**	**0.3695**	**1.4700e-003**	**0.1285**	**1.3700e-003**	**0.1298**	**0.0346**	**1.2900e-003**	**0.0359**	**0.0000**	**139.0152**	**139.0152**	**3.6300e-003**	**0.0103**	**142.1689**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888
Paving	5.8000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0161**	**0.1019**	**0.1458**	**2.3000e-004**		**5.1000e-003**	**5.1000e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**20.0269**	**20.0269**	**6.4800e-003**	**0.0000**	**20.1888**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.9000e-004	4.8800e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.4000e-004	0.0000	1.2845	1.2845	3.0000e-005	3.0000e-005	1.2958
Total	**5.2000e-004**	**3.9000e-004**	**4.8800e-003**	**1.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6500e-003**	**4.4000e-004**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**1.2845**	**1.2845**	**3.0000e-005**	**3.0000e-005**	**1.2958**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888
Paving	5.8000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0161**	**0.1019**	**0.1458**	**2.3000e-004**		**5.1000e-003**	**5.1000e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**20.0268**	**20.0268**	**6.4800e-003**	**0.0000**	**20.1888**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.9000e-004	4.8800e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.4000e-004	0.0000	1.2845	1.2845	3.0000e-005	3.0000e-005	1.2958
Total	**5.2000e-004**	**3.9000e-004**	**4.8800e-003**	**1.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6500e-003**	**4.4000e-004**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**1.2845**	**1.2845**	**3.0000e-005**	**3.0000e-005**	**1.2958**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4981					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5600e-003	0.0174	0.0242	4.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	3.4043	3.4043	2.0000e-004	0.0000	3.4094
Total	**0.5007**	**0.0174**	**0.0242**	**4.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**3.4043**	**3.4043**	**2.0000e-004**	**0.0000**	**3.4094**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1500e-003	8.6000e-004	0.0107	3.0000e-005	3.6200e-003	2.0000e-005	3.6400e-003	9.6000e-004	2.0000e-005	9.8000e-004	0.0000	2.8260	2.8260	7.0000e-005	8.0000e-005	2.8507
Total	**1.1500e-003**	**8.6000e-004**	**0.0107**	**3.0000e-005**	**3.6200e-003**	**2.0000e-005**	**3.6400e-003**	**9.6000e-004**	**2.0000e-005**	**9.8000e-004**	**0.0000**	**2.8260**	**2.8260**	**7.0000e-005**	**8.0000e-005**	**2.8507**

3.7 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4981					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5600e-003	0.0174	0.0242	4.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	3.4043	3.4043	2.0000e-004	0.0000	3.4094
Total	**0.5007**	**0.0174**	**0.0242**	**4.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**3.4043**	**3.4043**	**2.0000e-004**	**0.0000**	**3.4094**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1500e-003	8.6000e-004	0.0107	3.0000e-005	3.6200e-003	2.0000e-005	3.6400e-003	9.6000e-004	2.0000e-005	9.8000e-004	0.0000	2.8260	2.8260	7.0000e-005	8.0000e-005	2.8507
Total	**1.1500e-003**	**8.6000e-004**	**0.0107**	**3.0000e-005**	**3.6200e-003**	**2.0000e-005**	**3.6400e-003**	**9.6000e-004**	**2.0000e-005**	**9.8000e-004**	**0.0000**	**2.8260**	**2.8260**	**7.0000e-005**	**8.0000e-005**	**2.8507**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Parking Lot	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Unrefrigerated Warehouse-No Rail	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8449	6.0000e-005	6.7800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0132	0.0132	3.0000e-005	0.0000	0.0141
Unmitigated	0.8449	6.0000e-005	6.7800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0132	0.0132	3.0000e-005	0.0000	0.0141

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0969					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7473					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.3000e-004	6.0000e-005	6.7800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0132	0.0132	3.0000e-005	0.0000	0.0141
Total	**0.8449**	**6.0000e-005**	**6.7800e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0132**	**0.0132**	**3.0000e-005**	**0.0000**	**0.0141**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0969					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7473					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.3000e-004	6.0000e-005	6.7800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0132	0.0132	3.0000e-005	0.0000	0.0141
Total	**0.8449**	**6.0000e-005**	**6.7800e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0132**	**0.0132**	**3.0000e-005**	**0.0000**	**0.0141**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Durst Drive Warehouse (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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APPENDIX 3.2:

CALEEMOD OPERATIONAL EMISSIONS MODEL OUTPUTS

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Durst Drive Warehouse (Operations)

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	203.35	1000sqft	4.67	203,351.00	0
User Defined Industrial	203.35	User Defined Unit	0.00	0.00	0
Parking Lot	183.00	Space	1.10	48,110.00	0
Other Asphalt Surfaces	145.08	1000sqft	3.33	145,079.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Project area is 9.10 acres

Construction Phase - Operatiosn run only

Off-road Equipment - Operatiosn run only

Vehicle Trips - Trip rates based on ITE 11th Edition for High-Cube Transload Short-Term Warehouse (ITE Code 154)

Fleet Mix - Passenger Car Mix estimated based on the CalEEMod default fleet mix and the ratio of LDA, LDT1, LDT2, MDV, & MCY. Truck Mix based ratio of LHDT1, LHDT2, MHDT, and HHDT

Operational Off-Road Equipment - Based on SCAQMD High Cube Warehouse Truck Trip Study White Paper Summary of Busniess Survey Results (2014)

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	7/28/2022	6/30/2022
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.63
tblFleetMix	LDA	0.54	0.58
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.19
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.14
tblFleetMix	LHD2	7.1960e-003	0.00
tblFleetMix	LHD2	7.1960e-003	0.04
tblFleetMix	MCY	0.03	0.03
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.14	0.15
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	5.0710e-003	0.00
tblFleetMix	MH	5.0710e-003	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.20
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	OBUS	5.5900e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	SBUS	9.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00
tblFleetMix	UBUS	2.5400e-004	0.00

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LandUseSquareFeet	73,200.00	48,110.00
tblLandUse	LotAcreage	1.65	1.10
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperHorsePower	97.00	200.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblVehicleTrips	CW_TL	16.60	40.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.74	0.79
tblVehicleTrips	ST_TR	0.00	0.15
tblVehicleTrips	SU_TR	1.74	0.73
tblVehicleTrips	SU_TR	0.00	0.14
tblVehicleTrips	WD_TR	1.74	1.18
tblVehicleTrips	WD_TR	0.00	0.23

2.0 Emissions Summary

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8451	9.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0182	0.0182	5.0000e-005	0.0000	0.0194
Energy	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	108.4650	108.4650	7.7300e-003	1.2900e-003	109.0416
Mobile	0.1610	1.4056	1.8787	0.0100	0.6061	0.0148	0.6210	0.1651	0.0141	0.1792	0.0000	964.8877	964.8877	0.0388	0.1099	998.6041
Offroad	0.0201	0.1891	0.1367	5.8000e-004		6.8600e-003	6.8600e-003		6.3100e-003	6.3100e-003	0.0000	50.7519	50.7519	0.0164	0.0000	51.1623
Waste						0.0000	0.0000		0.0000	0.0000	38.8017	0.0000	38.8017	2.2931	0.0000	96.1296
Water						0.0000	0.0000		0.0000	0.0000	14.9188	108.5902	123.5089	1.5415	0.0373	173.1586
Total	**1.0284**	**1.6148**	**2.0417**	**0.0107**	**0.6061**	**0.0233**	**0.6294**	**0.1651**	**0.0220**	**0.1870**	**53.7205**	**1,232.7130**	**1,286.4335**	**3.8976**	**0.1485**	**1,428.1156**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8451	9.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0182	0.0182	5.0000e-005	0.0000	0.0194
Energy	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	108.4650	108.4650	7.7300e-003	1.2900e-003	109.0416
Mobile	0.1610	1.4056	1.8787	0.0100	0.6061	0.0148	0.6210	0.1651	0.0141	0.1792	0.0000	964.8877	964.8877	0.0388	0.1099	998.6041
Offroad	0.0201	0.1891	0.1367	5.8000e-004		6.8600e-003	6.8600e-003		6.3100e-003	6.3100e-003	0.0000	50.7519	50.7519	0.0164	0.0000	51.1623
Waste						0.0000	0.0000		0.0000	0.0000	38.8017	0.0000	38.8017	2.2931	0.0000	96.1296
Water						0.0000	0.0000		0.0000	0.0000	14.9188	108.5902	123.5089	1.5415	0.0373	173.1586
Total	**1.0284**	**1.6148**	**2.0417**	**0.0107**	**0.6061**	**0.0233**	**0.6294**	**0.1651**	**0.0220**	**0.1870**	**53.7205**	**1,232.7130**	**1,286.4335**	**3.8976**	**0.1485**	**1,428.1156**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2022	6/30/2022	5	0	

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 4.43

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1610	1.4056	1.8787	0.0100	0.6061	0.0148	0.6210	0.1651	0.0141	0.1792	0.0000	964.8877	964.8877	0.0388	0.1099	998.6041
Unmitigated	0.1610	1.4056	1.8787	0.0100	0.6061	0.0148	0.6210	0.1651	0.0141	0.1792	0.0000	964.8877	964.8877	0.0388	0.1099	998.6041

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	239.00	160.30	148.36	920,608	920,608
User Defined Industrial	46.00	30.85	28.55	601,929	601,929
Total	285.00	191.15	176.92	1,522,537	1,522,537

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
User Defined Industrial	40.00	8.40	6.90	100.00	0.00	0.00	100	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Parking Lot	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Unrefrigerated Warehouse-No Rail	0.578100	0.060000	0.185300	0.149400	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.027200	0.000000	0.000000
User Defined Industrial	0.000000	0.000000	0.000000	0.000000	0.137300	0.036600	0.195700	0.630400	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	86.6533	86.6533	7.3100e-003	8.9000e-004	87.1003
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	86.6533	86.6533	7.3100e-003	8.9000e-004	87.1003
NaturalGas Mitigated	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.8117	21.8117	4.2000e-004	4.0000e-004	21.9413
NaturalGas Unmitigated	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.8117	21.8117	4.2000e-004	4.0000e-004	21.9413

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	408736	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.8117	21.8117	4.2000e-004	4.0000e-004	21.9413
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.2000e-003**	**0.0200**	**0.0168**	**1.2000e-004**		**1.5200e-003**	**1.5200e-003**		**1.5200e-003**	**1.5200e-003**	**0.0000**	**21.8117**	**21.8117**	**4.2000e-004**	**4.0000e-004**	**21.9413**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	408736	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.8117	21.8117	4.2000e-004	4.0000e-004	21.9413
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.2000e-003**	**0.0200**	**0.0168**	**1.2000e-004**		**1.5200e-003**	**1.5200e-003**		**1.5200e-003**	**1.5200e-003**	**0.0000**	**21.8117**	**21.8117**	**4.2000e-004**	**4.0000e-004**	**21.9413**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	16838.5	2.9862	2.5000e-004	3.0000e-005	3.0016
Unrefrigerated Warehouse-No Rail	471774	83.6671	7.0600e-003	8.6000e-004	84.0987
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**86.6533**	**7.3100e-003**	**8.9000e-004**	**87.1003**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	16838.5	2.9862	2.5000e-004	3.0000e-005	3.0016
Unrefrigerated Warehouse-No Rail	471774	83.6671	7.0600e-003	8.6000e-004	84.0987
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**86.6533**	**7.3100e-003**	**8.9000e-004**	**87.1003**

6.0 Area Detail

6.1 Mitigation Measures Area

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8451	9.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0182	0.0182	5.0000e-005	0.0000	0.0194
Unmitigated	0.8451	9.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0182	0.0182	5.0000e-005	0.0000	0.0194

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0969					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7473					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.7000e-004	9.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0182	0.0182	5.0000e-005	0.0000	0.0194
Total	**0.8451**	**9.0000e-005**	**9.3800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0182**	**0.0182**	**5.0000e-005**	**0.0000**	**0.0194**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0969					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7473					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.7000e-004	9.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0182	0.0182	5.0000e-005	0.0000	0.0194
Total	**0.8451**	**9.0000e-005**	**9.3800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0182**	**0.0182**	**5.0000e-005**	**0.0000**	**0.0194**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	123.5089	1.5415	0.0373	173.1586
Unmitigated	123.5089	1.5415	0.0373	173.1586

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	47.0247 / 0	123.5089	1.5415	0.0373	173.1586
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**123.5089**	**1.5415**	**0.0373**	**173.1586**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	47.0247 / 0	123.5089	1.5415	0.0373	173.1586
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**123.5089**	**1.5415**	**0.0373**	**173.1586**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	38.8017	2.2931	0.0000	96.1296
Unmitigated	38.8017	2.2931	0.0000	96.1296

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	191.15	38.8017	2.2931	0.0000	96.1296
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**38.8017**	**2.2931**	**0.0000**	**96.1296**

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	191.15	38.8017	2.2931	0.0000	96.1296
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**38.8017**	**2.2931**	**0.0000**	**96.1296**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Tractors/Loaders/Backhoes	1	4.00	365	200	0.37	CNG

Durst Drive Warehouse (Operations) - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Tractors/Loaders/ Backhoes	0.0201	0.1891	0.1367	5.8000e-004		6.8600e-003	6.8600e-003		6.3100e-003	6.3100e-003	0.0000	50.7519	50.7519	0.0164	0.0000	51.1623
Total	**0.0201**	**0.1891**	**0.1367**	**5.8000e-004**		**6.8600e-003**	**6.8600e-003**		**6.3100e-003**	**6.3100e-003**	**0.0000**	**50.7519**	**50.7519**	**0.0164**	**0.0000**	**51.1623**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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Phase I Environmental Site Assessment

1230 West Durst Drive
Rialto, California

April 12, 2021

Prepared for:

BCIF Acquisitions LLC.

Prepared by:

Roux Associates, Inc.
5150 E. Pacific Coast Highway, Suite 450
Long Beach, California, 90804

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EXECUTIVE SUMMARY

BCIF Acquisitions LLC (BCIF, the User) retained Roux Associates, Inc. (Roux) to perform a Phase I Environmental Site Assessment (ESA) of the property located at 1230 West Durst Drive, City of Rialto, San Bernardino County, California, Assessor's Parcel Numbers (APNs) 0128-062-25, 0128-062-26, and 0128-062-27 (the Site). Roux performed this Phase I ESA in general accordance with the American Society for Testing Materials (ASTM) *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E1527-13) to identify, to the extent feasible, the presence of recognized environmental conditions (RECs) with respect to the Site as defined in ASTM E1527-13. Exceptions to, or deletions from, this practice are described in Section 8.1 of this report.

The Site consists of three contiguous parcels totaling 9.39 acres located on the northeast corner of the intersection at West Durst Drive and South Cedar Avenue in an industrial area of Rialto, California. Based on a review of historical sources, the Site consisted of undeveloped land until the 1930s at which time it was developed for agricultural use. The Site remained developed for agricultural use through approximately 1980 and consisted of mostly vacant land from at least 1985 until it was redeveloped by Southland Pipe Corporation in 2001. Southland Pipe Corporation occupied the Site as a pipe manufacturing facility until December 2020. The Site is currently unoccupied and consists of an industrial building, a paved parking area, and unpaved open areas.

On March 15, 2021, Roux visually assessed the Site during the site reconnaissance for potential RECs, including, but not limited to the following:

- Potential underground storage tanks (USTs)
- Aboveground storage tanks (ASTs)
- Polychlorinated biphenyl (PCB)-containing equipment
- Hazardous materials storage or handling areas
- Containerized or bulk wastes
- Visual indications of impacted soil.

Roux also performed a records review to identify RECs in connection with the Site. This records review addressed the Site and surrounding properties. Roux reviewed commercially available records associated with the Site and nearby properties to assess potential concerns associated with the migration of hazardous substances. The records review also included reasonably ascertainable historical data, which can be helpful in identifying the past uses of the Site and surrounding areas, as it may relate to the environmental condition of the Site.

Roux performed interviews and/or file reviews with various government agencies and other parties with possible knowledge of the Site and surrounding properties to identify current and past uses of the Site and surrounding areas, as they may relate to the environmental condition of the Site.

ASTM E 1527-13 defines a Recognized Environmental Condition (REC) as:

> "The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions."

A Controlled Recognized Environmental Condition (cREC) as:

> "A recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."

And a Historical Recognized Environmental Condition (hREC) as:

> "A past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). Before calling the past release a historical recognized environmental condition, the environmental professional must determine whether the past release is a *recognized* environmental condition at the time the Phase I Environmental Site Assessment is conducted (for example, if there has been a change in the regulatory criteria). If the EP considers the past release to be a recognized environmental condition at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a recognized environmental condition."

The term recognized environmental condition is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

This Executive Summary provides a brief overview of the findings of this Phase I ESA. Although the Executive Summary is an integral part of a report, it does not substitute for reading the entire report or the appended or referenced documents to fully understand the findings and potential environmental concerns associated with the Site.

Based on the information obtained through the performance of this Phase I ESA, Roux did not identify any RECs, hRECs, or cRECs in connection with the current and historical operations at the Site or adjacent properties. To avoid confusion, all RECs, cRECs, hRECs, and other environmental features (OEFs) are numbered sequentially.

The term recognized environmental condition is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. OEFs are environmental conditions that do not meet the definition of a REC, but which may warrant mention in a

comprehensive Phase I ESA. Based on the information obtained through the performance of this Phase I ESA, Roux identified the following OEFs. To the extent possible, the locations of the OEFs are shown in Figure 2.

OEF 1 – Historical Agricultural Use. According to historical sources, the Site was used for agricultural purposes (row crops) as early as 1938 through approximately 1980. It is likely that agricultural chemicals were used on-Site. Based on a review of aerial photographs, the Site does not appear to have been developed with orchards, which would indicate that the agricultural chemicals were not used as heavily making potential impacts less likely. A limited soil investigation conducted at the Site in 2020 did not identify metals above action levels or regional background concentrations. Based on the available information, Roux considers the historical agricultural use to be an OEF in the context of the Phase I ESA. No sampling is recommended.

OEF 2 – Adjoining Railroad. According to historical sources and site observations, the northern adjoining railroad was constructed by 1896. The materials historically transported along the railroad are unknown. Both the presence of these railroad lines and the materials transported along the railroad lines may have potentially impacted the subsurface at the Site. Railroad ties have historically and are presently treated with copper arsenate, creosote (which contains polycyclic aromatic hydrocarbons [PAHs], polychlorinated biphenyls (PCBs), pentachlorophenol (which also contains dioxins), and copper naphthalene. In addition to these chemicals, railway transportation is associated with heavy metals, herbicides, pesticides, volatile organic compounds (VOCs), and petroleum product impacts. No evidence of a likely release associated with the rail lines was identified during the course of the Phase I ESA. Based on the available information, Roux considers the adjoining railroad to be an OEF in the context of the Phase I ESA. No sampling is recommended.

OEF 3 – Adjoining UST Facility. SM Logistics Rialto, LLC (1110 West Merrill Avenue), located adjacent to the east, was identified as an Underground Storage Tank (UST) facility, as discussed above in Section 7.1.2. Based on the information reviewed by Roux, this UST facility has not been the subject of subsurface investigation and no documented releases have been reported. Moreover, during their Site reconnaissance, Roux did not observe any indications of subsurface investigation at the former UST facility, such as patched borings or monitoring well vaults. Based on the available information, Roux considers the former UST facility to be an OEF in the context of the Phase I ESA. No sampling is recommended.

1. INTRODUCTION

Roux Associates, Inc. (Roux) completed this Phase I Environmental Site Assessment (ESA) of the commercial property located at 1230 West Durst Drive, City of Rialto, San Bernardino County, California (the Site). The Site location is shown in Figure 1 and the Site and vicinity is shown in Figure 2. Roux performed this Phase I ESA in compliance with the scope and limitations of American Society for Testing Materials (ASTM) E1527-13 and the terms and conditions of Roux' proposal dated March 4, 2021. Roux conducted this Phase I ESA for the benefit of BCIF Acquisitions LLC (BCIF, the User).

The following sections of this report present our Phase I ESA findings and conclusions. A glossary containing terms and definitions presented in ASTM E1527-13 is included in Appendix A – Glossary of Terms. Other appendices presented at the end of the report include historical topographic maps, historical aerial photographs, regulatory records review documentation, applicable historical records, and personnel qualifications.

1.1 Purpose

The purpose of this Phase I ESA is to identify and report, to the extent feasible, recognized environmental conditions (RECs) with respect to the Site. Performing a Phase I ESA in general compliance with ASTM E 1527-13 may enable a User to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) liability. That is, the practice that constitutes one of the requirements for "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined in 42 USC Section 9601(35) (B).

1.2 Scope of Services

The scope of services for this Phase I ESA included, but was not limited to, the activities listed below.

- A review of reasonably ascertainable and practicably reviewable topographic maps, historical aerial photographs, and city directories, if available, to investigate past Site conditions;
- A review of specific government lists pursuant to ASTM Standard E 1527-13 regarding environmental activities for the Site and local area properties;
- A review of recorded land title records, building, assessors, and fire department records, for permits, citations, and reports connected to the Site that were reasonably ascertainable, practicably reviewable, and publicly available within reasonable time and cost;
- An inspection by an environmental professional to investigate the current use of the Site and to identify environmental concerns including but not limited to, the presence of hazardous substances or petroleum products, wastes, underground storage tanks (USTs), aboveground storage tanks (ASTs), or other environmental concerns;
- Interviews with available representatives of the owner of the Site, occupants, and local government officials by an environmental professional; and
- Preparation of this Phase I ESA report.

Roux initiated this Phase I ESA pursuant to receipt of written authorization to proceed on March 4, 2021.

1.3 Standard of Care

Roux conducted this Phase I ESA using a defined scope of services considered appropriate and agreed upon by all parties on the date the service was authorized, unless the scope of services or the methods used were later modified, in writing, and accepted by all parties prior to performance. Roux conducted this Phase I ESA in accordance with generally accepted practices in a manner consistent with that level of care exercised by other members of our profession in the same locality and under similar conditions of time and accessibility of improvements and information. No other representations, expressed or implied, and no warranty or guarantee is included or intended to be part of this Phase I ESA.

Please note that the scope of services performed in execution of this assessment may not be appropriate to satisfy the needs of other parties. We, therefore, are not responsible for independent conclusions, opinions, or recommendations of others based on our assessment. Furthermore, this Phase I ESA relates to the environmental conditions of the Site and does not address issues raised in transactions such as business risk, purchase of business entities, or interests therein, or of their assets, that may well involve environmental liabilities pertaining to properties previously owned or operated or other offsite liabilities.

Additionally, the findings of this Phase I ESA are based on Roux' observations, inquiries, and historical research using reasonably ascertainable and practically reviewable information obtained within reasonable time and cost constraints. Roux does not represent that this Phase I ESA is an exhaustive investigation that reflects the findings of all of the information available for the Site, nor is it representative of future Site conditions. If additional information is generated from the Site, it should be provided to Roux so that we may evaluate its impact on our conclusions. As such, activities or episodes that transpire subsequent to this Phase I ESA are not considered in this assessment. It is not intended that a Phase I ESA in accordance with ASTM E1527-13 be an exhaustive assessment of a property nor can it wholly eliminate uncertainty regarding the potential for *recognized environmental conditions* in connection with a property.

1.4 Assumptions

This Phase I ESA Report, including the exhibits attached hereto, describes the results of Roux's investigation to identify the presence of *recognized environmental conditions* connected with the Site in accordance with ASTM E1527-13, as allowed by and consistent with the regulatory requirements of the All Appropriate Inquiry Rule, 40 CFR Part 312, Amendment to Standards and Practices for All Appropriate Inquires Under CERCLA, Final Rule, published December 30, 2013 (AAI Rule). Specifically, the preamble to the amended AAI Rule states:

> *The Environmental Protection Agency (EPA) today is taking final action to amend the standards and practices for conducting all appropriate inquiries under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) to reference a standard practice recently made available by ASTM International, a widely recognized standards development organization. Specifically, this final rule amends the "All Appropriate Inquiries Rule" at 40 CFR Part 312 to reference ASTM International's E1527–13 "Standard Practice for Environmental Site Assessments: Phase I Environmental Site*

Assessment Process" and make clear that persons conducting all appropriate inquiries may use the procedures included in this standard to comply with the All Appropriate Inquiries Rule[1].

One of the requirements that a person acquiring real property must meet in order to qualify for either the innocent landowner, contiguous owner, or bona fide prospective purchaser (collectively hereinafter "Prospective Purchaser") defense to liability under the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986, and the Small Business Liability Relief and Brownfields' Revitalization Act of 2002, 42 U.S.C. 9601-9675 (collectively referred to hereafter as "CERCLA") is that person must conduct all appropriate inquiries into the previous ownership and uses of the property in conformance with the AAI Rule (or the ASTM E1527-13) prior to acquisition of the property. The User has acknowledged that, under the AAI Rule, Roux' performance of this Phase I ESA in accordance with ASTM E1527-13 will not alone result in the User satisfying all requirements of the AAI Rule and will not in itself provide a defense to CERCLA liability. The User has acknowledged that the AAI Rule also requires that the Prospective Purchaser undertake certain additional inquiries and post-acquisition activities to satisfy the CERCLA AAI requirements. Accordingly, Roux makes no guarantees or warranties, expressed or implied, regarding this Phase I ESA, including without limitation, that this Phase I ESA will qualify the User for a defense to CERCLA liability.

Roux has performed this Phase I ESA in a professional manner using that degree of skill and care exercised for similar projects under similar conditions by reputable and competent environmental consultants. Professional judgments expressed herein are based on the facts currently available to Roux.

The AAI Rule requires, and the conclusions and recommendations stated herein represent, the application of a variety of engineering and technical disciplines to material facts and conditions associated with the Site. As such, these conclusions and recommendations are based on subjective interpretations and the exercise of discretion based on the facts available to Roux and conditions at the time of the performance of this Phase I ESA. Many of these facts and conditions are subject to change over time. Accordingly, the conclusions and recommendations must be considered within this context.

The User has agreed that Roux shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time this Phase I ESA was performed. To the extent practicable, Roux has identified data gaps, and has evaluated the potential significance of such data gaps. Recommendations to address those data gaps are presented herein and are based on the data available at the time of the performance of this Phase I ESA. Implementation of the recommendations may not fully address the data gaps, and the information obtained from execution of those recommendations may alter and/or modify the interpretation of the Site conditions and conclusions, herein. This Phase I ESA does not include consideration of matters specifically excluded by ASTM E1527-13, including but not limited to, asbestos-containing building materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, and mold unless specifically identified herein.

Roux has not collected any soil and/or groundwater samples on the Site for Phase I purposes, and is relying on information presented by others, often in preliminary, draft, or verbal form. By referencing this information, Roux does not accept responsibility for the accuracy of the underlying data, sampling methods, laboratory analysis, or documentation.

[1] Federal Register: December 30, 2013 (Volume 78, Number 250) Page 79319

This Phase I ESA Report should not be considered a legal interpretation of existing environmental laws and regulations. This Phase I ESA was conducted with a reasonable degree of inquiry to identify *recognized environmental conditions*, but uncertainty is not eliminated. No Phase I ESA can wholly eliminate uncertainty regarding the potential for *recognized environmental conditions* in connection with a property. The Phase I ESA process is intended to reduce, but not eliminate, the uncertainty involved with identifying *recognized environmental conditions*.

This Phase I ESA Report is not an appraisal or value judgment of the Site. The User has agreed that Roux shall not be liable for any use of this Phase I ESA Report as an appraisal or value judgment of the Site.

This Phase I ESA Report has been prepared for the exclusive use of the User for specific application to the Site covered by this Phase I ESA Report. The User has agreed that any third-party use of this Phase I ESA Report, upon disclosure by the User, is the sole responsibility and at the sole liability of the User.

1.5 User Reliance

This report is confidential and has been prepared for the exclusive use of the User. No additional parties may use the information contained in this report without obtaining the written permission of Roux or the User. Roux' duties and obligations extend to the User and to no other party. Roux' duties and obligations to the User are not transferable to persons, corporations, or organizations without the express written consent of the User and Roux. The User may rely upon the information provided in this Phase I ESA report for a period of 180 days from the date of issue. After 180 days, this Phase I ESA should be updated in accordance with ASTM guidance. Roux will not be liable for any consequential damages arising from the use of this report for other than its intended purpose, for use of this report beyond 180 days of its issue date, or from unauthorized use by third parties.

This Phase I ESA report must be read and interpreted as a whole and can only be considered representative of the conditions of the Site as of the date of our site reconnaissance described herein. Roux makes no representation whatsoever concerning the condition of the Site beyond the date of our site reconnaissance described herein. Individual sections and appendices of this report are dependent on the balance of this report, and on the terms, conditions, and stipulations contained in the proposal and written amendments accepted by Roux.

2. SITE DESCRIPTION

2.1 Site Location and Description

Site Information	
Site Name	BCIF Rialto
Street Address(es)	1230 West Durst Drive
City	City of Rialto
County	San Bernardino
State	California
Location	Northeast of the intersection between South Cedar Avenue and West Durst Drive
Assessor's Parcel Number (APN)	0128-062-25, 0128-062-26, and 0128-062-27
Site Acreage (per San Bernardino County Assessor Website)	9.39 acres
Site Occupant(s)	None; previously occupied by Southland Pipe Corporation from 2001 through 2020.
Onsite Operations	None; currently unoccupied.
Description of Onsite Structures	One single-story fabrication building.
Site Paving	Asphalt-paved parking area in southwestern portion of Site. Remaining open areas are unpaved.
Site Grading	Graded to drain at a gentle slope roughly oriented north to south.
Site Vicinity	Industrial area.

Refer to Section 5.0 for a detailed description of the current condition of the Site and operations.

2.2 Vicinity General Characteristics

The facilities and improvements which are located immediately adjacent to the Site are provided in the following table.

Direction from Site	Improvements / Use (Addresses)
North	Railroad/Metrolink State Pipe & Supply pipe manufacturing and storage (183 South Cedar Avenue)
East	Rialto Distribution warehouse and distribution center (1110 West Merrill Avenue)
South	West Durst Drive, Mission Metals steel and metals distribution center (1251 West Durst Drive), and vacant lot
West	South Cedar Avenue, Martinez & Turek metals products engineering and manufacturing (300 South Cedar Avenue)

Direction from Site	Improvements / Use (Addresses)
Northwest	South Cedar Avenue and railroad/Metrolink, American Building Supply building supply warehouse and distribution center (120 South Cedar Avenue)

2.3 Past Use of the Site

Based on a review of historical sources, the Site consisted of undeveloped land until the 1930s at which time it was developed for agricultural use. The Site remained developed for agricultural use through approximately 1980 and consisted of mostly vacant land from at least 1985 until it was redeveloped by Southland Pipe Corporation in 2001. Southland Pipe Corporation occupied the Site as a pipe manufacturing facility until December 2020. The Site is currently unoccupied and consists of an industrial building, a paved parking area, and unpaved open areas.

2.4 Physical Setting

Roux obtained and reviewed published, reasonably ascertainable information concerning the physical setting of the Site. The following is a summary of the information reviewed from those physical setting sources.

Physical Setting Summary	
United States Geological Survey (USGS) Topographic Map	Fontana, California Quadrangle
Approximate Site Elevation / Source	1230 feet above mean sea level (msl) / Fontana, California (2012) 7.5-minute quadrangle topographic map published by the USGS
Nearest Surface Water Features / Approximate Distance	Unmarked concrete-lined stormwater drainage channel / 0.73 mile east of the Site
Regional Geology / Source	Quaternary deposits: alluvium, lake, playa and terrace, consolidated and semi-consolidated / California Department of Conservation, 2010 Geologic Map of California
Site Topography / Source	Generally flat with a gradual slope to the south / Site observation and USGS topographic map
Hydrogeological Region / Source	Located along the eastern edge of the Chino Subbasin within the Upper Santa Ana Valley Groundwater Basin / *California Department of Water Resources Bulletin 118, Update 2003 and Interim Update 2016*
Depth to Groundwater / Source	Approximately 130 to 210 feet bgs / Groundwater monitoring data for a facility approximately 2.6 miles southeast of the Site (Jacobs, 2021)
Groundwater Gradient Direction / Source	South / Site assessment report for a facility approximately 2.1 miles southeast of the Site (GeoHydrologic, 2006)
Onsite Soil	Primarily gravelly sands, silty sands, and sandy silts to 5 feet bgs and sand to approximately 15 feet bgs. (Ramboll, 2020)

3. SOURCES OF INFORMATION

Sources of information utilized in preparing this Phase I ESA report included historical topographic maps; historical aerial photographs; a walkover survey of the Site and adjoining properties; in-person discussions with User and tenant personnel; a review of records available at selected local and state regulatory agencies; a review of databases maintained by local, state, and federal government agencies; and other records available from commercial and online sources.

3.1 Historical Sources

To help understand the history of the Site and past land uses, historical sources were obtained from Environmental Data Resources, Inc. (EDR), of Shelton, Connecticut. The sources and locations within the Appendices are provided in the table below.

EDR Historical Sources		
Historical Range	**Source**	**Appendix**
1896 - 2012	U.S. Geological Survey Topographic Maps Nationwide Environmental Title Research LLC (NETR) Historical Database	B
1938 - 2016	EDR Aerial Photographs "Decade Package"	C
No Available Coverage	EDR "Certified Sanborn® Map Report"	D
1942 - 2017	EDR "City Directory Image Report"	E

Note: Due to copyright restrictions, the topographic maps reviewed on NETR Historical Aerials Database were not included in the appendices.

3.2 Site Reconnaissance

On March 15, 2021, Roux personnel conducted a Site Reconnaissance of the Site, including the interiors of the Site building and open areas historically used for pipe fabrication. Roux also visually and/or physically observed adjoining properties from reasonably accessible locations on the Site and public thoroughfares. Photographs taken during the Site reconnaissance are provided in Appendix G.

3.3 Regulatory Agencies

Roux contacted governmental agencies for reasonably ascertainable information concerning environmental conditions at the Site. Roux contacted or reviewed information from the agencies provided in the following table. Refer to Appendix H – Pertinent Historical Documentation for copies of the records reviewed. A summary of the information gathered from the regulatory agencies is provided in the table and details regarding the records were incorporated into applicable sections as noted.

Agency	Date Requested / Accessed	Response Date	Description of Records	Section Discussed
Federal				
U.S. Environmental Protection Agency (EPA) – FOIAonline	3/5/2021	3/18/2021	Response indicates all records are on the EnviroFacts database	N/A
U.S. EPA EnviroFacts	3/5/21	N/A	RCRA and Permit Compliance System (PCS) Generator ID associated with Southland Pipe Corporation.	7.1.1
U.S EPA MyProperty Database	3/5/21	N/A	Query result indicates records are on the EnviroFacts database.	N/A
National Pipeline Mapping System (NPMS) Online Database	3/5/21	N/A	Hazardous liquid pipeline along North Linden Avenue (1,400 feet to the west) and gas transmission pipeline along Merrill Avenue (700 feet to the south). No reported release accidents or incidents in the area.	N/A
State				
State Water Resources Control Board (SWRCB): GeoTracker Online Database	3/5/21	N/A	No records associated with the Site	N/A
SWRCB: Storm Water Multiple Application and Report Tracking System (SMARTS) Online Database	3/5/21	N/A	Annual Reports, Inspections, and a Notice of Termination were identified associated with WDID 8361024180 (Southland Pipe Corp.)	7.1.1
Department of Toxic Substances Control (DTSC)	3/5/21	3/10/21	No records associated with the Site	N/A
DTSC: Cypress File Room	3/5/21	3/10/21	No records associated with the Site	N/A
DTSC: EnviroStor Online Database	3/5/21	N/A	No records associated with the Site	N/A
DTSC: Hazardous Waste Tracking System (HWTS) Online Database	3/5/21	N/A	An inactive Generator Profile (CAL000343047) is associated with the Site. No waste manifests.	N/A

Agency	Date Requested / Accessed	Response Date	Description of Records	Section Discussed
California Air Resources Board (CARB)	3/5/21	3/9/21	No records associated with the Site.	N/A
California Office of Environmental Health Hazard Assessment (OEHHA)	3/5/21	Pending	N/A	N/A
California EPA (CalEPA)	3/5/21	Pending	N/A	N/A
CalEPA CalRecycle	3/5/21	3/18/21	No records associated with the Site.	N/A
CalEPA CalRecycle Solid Waste Information System (SWIS) Online Database	3/5/21	N/A	No records associated with the Site.	N/A
State of California Department of Conservation: Division of Oil, Gas and Geothermal Resources (DOGGR) Online Database	3/5/21	N/A	No wells were identified within a 1,000-foot radius.	N/A
County / Regional				
Santa Ana Regional Water Quality Control Board (SARWQCB)	3/5/21	3/5/21	A response was received referencing the SWRCB SMARTS database.	7.1.1
South Coast Air Quality Management District (SCAQMD)	3/5/21	3/9/21	Permits and associated documents were identified for concrete batch equipment, two storage silos, and an air quality management system.	N/A
SCAQMD Facility Information Detail (FIND) Online Database	3/5/21	N/A	No records associated with the Site.	N/A
County of San Bernardino Department of Building and Safety	3/5/21	3/5/21	No records associated with the Site, directed to City of Rialto.	N/A
County of San Bernardino Department of Environmental Health Services (EHS)	3/5/21	3/15/21	No records associated with the Site.	N/A
County of San Bernardino Fire Department	3/5/21	3/20/21	Indicates that an inactive permit and compliance response activity are associated with Southland Pipe at the Site. Records pending.	N/A
City / Local				
City of Rialto City Clerk (Building Permits, Code Violations, Fire Violations)	3/5/21	N/A	A response is pending.	N/A

3.4 Government Databases

To document potential sources of contamination at or near the Site, a government records search was conducted by EDR. The search included local, state, and federal records for the Site and for other properties within ASTM-standard distances of the Site. The records search is summarized in Section 8.0 and a copy of "The EDR Radius Map™ Report with GeoCheck®," dated March 5, 2021, is included in its entirety as Appendix F. As recommended by ASTM, all but a few of the databases searched were "current," i.e., had been updated within 90 days prior to the search date.

3.5 User Provided Information

ASTM E1527-13 provides that the User perform certain tasks. The purpose of this section is to present select User-provided information that can assist in identifying possible *recognized environmental conditions* in connection with the Site. According to ASTM E1527-13, these tasks do not require the technical expertise of an environmental professional and the environmental professional generally does not perform these tasks. Roux administered a questionnaire to the User at the beginning of this Phase I ESA to assist them with these tasks. The following sections outline the parts of the questionnaire that the User completed.

3.5.1 Environmental Liens or Activity and Use Limitations

The User did not indicate that they have knowledge regarding environmental liens or activity and use limitations (engineering/institutional controls) with respect to the Site.

Roux obtained from EDR an *EDR Environmental Lien and AUL Search* report dated March 8, 2021. According to this EDR report, environmental liens or activity and use limitations with respect to the Site were not found.

3.5.2 Specialized Knowledge

The User did not report any specialized knowledge related to the Site.

3.5.3 Valuation Reduction for Environmental Issues

The User indicated that they have no knowledge regarding valuation reduction for environmental issues.

3.5.4 Commonly Known or Reasonably Ascertainable Information

The User did not have any knowledge regarding commonly known or reasonable ascertainable information about the Site not otherwise addressed.

3.5.5 Obvious Indicators of the Presence or Likely Presence of Contamination of the Site

The User did not have any knowledge regarding obvious indicators of the presence or likely presence of contamination of the Site not otherwise addressed.

4. SITE HISTORY

This section documents the history of the Site and describes current conditions and existing or former environmental features.

4.1 Site History

The history of the Site and, to a lesser extent, the surrounding area, including previous land use, has been compiled based on information from the exhaustive list of sources provided in Section 3.

Summary of Historical Sources				
Decade	**Year**	**Source**	**Site Description**	**Vicinity Description**
Predevelopment History				
Pre-1900	1896	Historical Topographic Map: San Bernardino (15-minute)	Vacant land located south of the Santa Fe Railroad and west of an unnamed road.	The Santa Fe Railroad is shown adjacent to the north of the Site. General surrounding area consists primarily of vacant land with small structures resembling homesteads and several unnamed roads. Slightly more developed area located approximately one mile to the east. No landmarks or other significant features are noted.
	1898	Historical Topographic Map: San Bernardino (15-minute)	No significant changes noted from prior history.	No significant changes noted from prior history.
1900s	1901	Historical Topographic Map: San Bernardino (15-minute)	No significant changes noted from prior history.	No significant changes noted from prior history.
	1909	Historical Topographic Map: San Bernardino (15-minute)	No significant changes noted from prior history.	No significant changes noted from prior history.
1910s	1913	Historical Topographic Map: San Bernardino (15-minute)	No significant changes noted from prior history.	No significant changes noted from prior history.
1920s	1926	Historical Topographic Map: San Bernardino (15-minute)	No significant changes noted from prior history.	No significant changes noted from prior history.

Summary of Historical Sources				
Decade	**Year**	**Source**	**Site Description**	**Vicinity Description**
	1929	Historical Topographic Map: San Bernardino (15-minute)	No significant changes noted from prior history.	No significant changes noted from prior history.
Agricultural Development				
1930s	1938	Historical Topographic Map: San Bernardino (15-minute)	No significant changes noted from prior history.	No significant changes noted from prior history.
		EDR Aerial Photograph	Appears to be developed with row crops for agricultural use.	Consists primarily of agricultural land. Railroad is located adjacent to the north and a small unpaved road is located to the west. Agricultural development, including orchards, are depicted in the surrounding area.
1940s	1942	Historical Topographic Map: San Bernardino (15-minute)	No significant changes from 1938 topographic map.	No significant changes from 1938 topographic map.
	1943	Historical Topographic Map: Fontana (7.5-minute)	Built-up (developed) land located within the City of Rialto. No structures or features depicted on-Site.	Consists primarily of built-up land. Santa Fe Railroad, unmarked road, and Pacific Electric Railway are located to the north.
	1948	EDR Aerial Photograph	No significant changes noted from prior use.	Adjacent road to the west depicted in 1938 aerial photograph is no longer present. No other significant changes noted from prior use.
1950s	1953	EDR Aerial Photograph	No significant changes noted from prior use.	No significant changes noted from prior use.
		Historical Topographic Map: Fontana (7.5-minute)	Developed for agricultural use (row crops).	Consists primarily of agricultural land including row crops and orchards. Santa Fe Railroad, Arrow Route, and Pacific Electric Railway are located to the north. Increased development, including built-up area of Rialto located approximately one mile to the east.
	1954	Historical Topographic Map: Fontana (7.5-minute)	No significant changes noted from prior history.	No significant changes noted from prior history.

Summary of Historical Sources				
Decade	**Year**	**Source**	**Site Description**	**Vicinity Description**
	1959	EDR Aerial Photograph	No significant changes noted from prior history.	Current road (Cedar Avenue) is depicted adjacent to the west. No other significant changes noted from prior history.
1960s	1966	EDR Aerial Photograph	No significant changes noted from prior history.	No significant changes noted from prior history.
	1967	Historical Topographic Map: San Bernardino South (7.5-minute)	No significant changes noted from prior history.	Cedar Avenue is depicted adjacent to the west. Additional development noted approximately one mile to the southwest and east. Adjacent railroad to the north is renamed Atchison Topeka and Santa Fe.
	1968	EDR Aerial Photograph	No significant changes noted from prior history.	Adjacent site to the west no longer appears developed for agricultural use. No other significant changes noted.
1970s	1973	Historical Topographic Map: San Bernardino South (7.5-minute)	No significant changes noted from prior history.	Increased development in the surrounding area including nearby commercial/industrial facility to the northeast.
	1975	Historical Topographic Map: San Bernardino (15-minute)	No significant changes noted from prior history.	Increased development to the surrounding area.
		EDR Aerial Photograph	Appears as agricultural or fallow land.	Increased development to the surrounding area.
1980s	1980	Historical Topographic Map: San Bernardino (15-minute)	No significant changes noted from prior history.	No significant changes noted from prior history.
	1985	EDR Aerial Photograph	Appears to consist of vacant land with unpaved transecting roads.	Vacant land to the east, south, and west. Agricultural land to the north and northwest. Increased development to the surrounding area.
1990s	1990	EDR Aerial Photograph	Vacant graded land.	Addition of current road (West Durst Drive) to the south. Development of current industrial properties to the east and west. Increased development to the surrounding area.

Summary of Historical Sources				
Decade	**Year**	**Source**	**Site Description**	**Vicinity Description**
	1994	EDR Aerial Photograph	No significant changes noted from prior history.	Adjacent site to the north no longer appears developed for agricultural use. No significant changes noted from prior history.
Industrial Development				
2000s	2001	EDR Building Permit Report	Site occupied by Southland Pipe Corporation as pipe fabrication facility.	N/A
	2002	EDR Aerial Photograph	Site developed for industrial, developed with the current industrial building, outdoor storage yard, and modular structures. Southeastern portion of the Site remains vacant graded land.	Adjacent site to the northwest no longer appears developed for agricultural use. Addition of current industrial building to the south.
	2005	EDR Aerial Photograph	No significant changes noted from prior history, except southeastern portion of Site has been developed as part of the outdoor storage yard.	Increased development to the surrounding area.
	2009	EDR Aerial Photograph	No significant changes noted from prior history.	Adjacent sites to the northwest and north appear developed with current industrial improvements. Increased development to the surrounding area.
2010s	2012	Historical Topographic Map: Fontana (7.5-minute)	No significant changes noted from prior history.	No significant changes noted from prior history.
		EDR Aerial Photograph	No significant changes noted from prior history.	No significant changes noted from prior history.
	2016	EDR Aerial Photograph	No significant changes noted from prior history.	No significant changes noted from prior history.
2020s	2021	Site observations	Site is currently unoccupied.	No significant changes noted from prior history.

4.2 Environmental Lien Search

Roux requested from EDR a search for environmental liens on the property. No environmental liens or other Activity and Use Limitations were identified. Our review of the environmental lien search did not reveal a *recognized environmental condition* at the Site.

4.3 Building Permit Report

Roux requested from EDR a search for building permits from the City of Rialto, City of Redding, and San Bernardino County for the Site. The table below summarizes the permits identified by EDR. It is noted that the list below is non-exhaustive and that multiple building permits and similar were identified during the online and in-person file reviews. Review of the EDR permit report did not reveal evidence of a *recognized environmental condition* at the Site not otherwise addressed in this report.

Date	Owner or Permit Applicant	Proposed Use	Permit Description
11/29/2012	Southland	Block wall – garden	Perimeter wall, 8-inch block (2,700 square feet)
11/16/2007	N/A	Electrical	10 single head light stands (cancelled at applicant's request)
6/5/2007	N/A	New industrial	Conference, mechanical, will call and file rooms, break and reception areas, 12 offices, 3 restrooms (cancelled at applicant's request)
2/22/2006	Barwick Electric	Electrical	Upgrade panel and install sub panel in fabrication shop
6/28/2005	N/A	New commercial	240 square-foot utility/maintenance building with overhand and exterior work area (cancelled at applicant's request)
1/10/2005	Plummer the Plumber	New commercial	Steel fabrication building only (4,990 square feet)
5/8/2002	N/A	Mobile home	Modular office set
1/23/2002	N/A	Electrical	Permits electrical and plumbing
12/17/2001	N/A	Electrical	Early power release
12/10/2001	Lifestyle Land Scapes	Plumbing	Back flow for lawn sprinkler system

Date	Owner or Permit Applicant	Proposed Use	Permit Description
8/31/2001	Southland Pipe	Block wall - garden	Perimeter block wall on the Cedar Avenue side and on the west side facing the metrolink

5. CURRENT SITE CONDITIONS

A Roux' representative conducted a reconnaissance of the Site and surrounding areas on March 15, 2021. During the Site visit, Roux representatives Ms. Nicole Svoboda and Mrs. Rocio Quinones traversed the Site on foot. They were unaccompanied during their survey. Roux also visually and/or physically observed adjoining properties from reasonably accessible locations on the Site and public thoroughfares. During the site reconnaissance, the weather was rainy, and the temperature was approximately 48° Fahrenheit. The following sections summarize observations during the inspection.

5.1 Site Reconnaissance

The Site consists primarily of roughly-graded land and is developed with one industrial building. According to the Site owner, Mr. Jim Laughlin, the Site has been unoccupied since December 2020. Roux representatives observed exterior areas, including previous manufacturing and processing areas. Interior areas of the industrial building, previously used for pipe fabrication, were also observed.

Roux representative observed an active electrical transformer and former process areas. The Site is bound by South Cedar Avenue to the west, West Durst Drive to the south, and Metrolink (railroad) to the north. Access to the Site was provided via a paved driveway along West Durst Drive.

5.2 Phase I ESA Observations

During Site reconnaissance, Roux personnel attempt to identify any environmental features that may be relevant in the context of the Phase I ESA. The features identified are summarized in the table below. Any such features are discussed in the following subsections.

Feature	Observed on the Site	Observed on an Adjacent Property
Areas of stressed vegetation		
Areas which receive flood or storm water from potentially contaminated areas		
Air Compressor Vent Discharges		
Drainage Swales and Culverts		
Discharge Areas		
Discolored or Spill Areas	X	
Drums (55 Gallons or Larger)		
Electrical Transformers	X	
Former Agricultural Applied Pesticide Area		
Hydraulic Lifts		
Incinerators		

Feature	Observed on the Site	Observed on an Adjacent Property
Landfills or Landfarms		
Loading and Unloading Areas		
Non-Contact Cooling Water Discharge		
Oil-Water Separator(s)		
Open Areas Away from Production Areas		
Process Area Sinks and Piping		
Rail Cars/Railroad Spurs		X
Septic Systems Leach Fields or Seepage Pits		
Silos		
Sprayfields		
Storm Sewer and Spill Containment Collection System		
Storm Water Detention Pond		
Surface Impoundments and Lagoons		
Underground / Aboveground Storage Tanks and Associated Piping		
Waste Piles		

5.2.1 Discolored or Spill Areas

Roux observed staining on the concrete floor in the northeastern portion of the former machine shop building (Photograph G-11). The staining did not appear recent and no equipment or containers were observed in the vicinity. No cracks were observed in the concrete floor. This area was investigated as part of a limited subsurface investigation conducted in 2020 (refer to Section 6.1.1). In the absence of information indicating significant impacts to the subsurface, the observed staining is not expected to be an environmental concern.

5.2.2 Electrical Transformers

Roux observed one pad-mounted transformer at the Site (Photograph G-4). Roux did not observe any staining at the base of the transformer. Based on the construction date and appearance of the transformer, it does not appear to be wet-type, with the potential to contain polychlorinated biphenyls (PCBs). Roux does not consider the presence of the transformer to be an environmental concern.

5.2.3 Rail Cars/Railroad Spurs

Roux observed a rail line (current Metrolink rail) located adjacent to the north of the Site. According to historical sources, the railroad was constructed prior to 1896. The materials historically transported along the railroad are unknown. Both the presence of these railroad lines and the materials transported along the

railroad lines may have potentially impacted the surrounding shallow soils. Railroad ties have historically and are presently treated with copper arsenate, creosote (which contains polycyclic aromatic hydrocarbons [PAHs], polychlorinated biphenyls (PCBs), pentachlorophenol (which also contains dioxins), and copper naphthalene. In addition to these chemicals, railway transportation is associated with heavy metals, herbicides, pesticides, volatile organic compounds (VOCs), and petroleum product impacts. No evidence of a likely release associated with the rail lines was identified during the course of the Phase I ESA. Based on the available information, Roux considers the adjoining railroad to be an other environmental feature (OEF) in the context of the Phase I ESA. No sampling is recommended.

5.3 Vapor Intrusion

Roux performed a vapor migration/intrusion pathway assessment. Adjoining and nearby properties (specifically the former UST facility) may also constitute possible sources for vapor intrusion. Based on the factors discussed in Section 7.1.2, the potential for vapor intrusion from adjoining and nearby properties is considered to be low.

6. SUMMARY OF KEY PREVIOUS INVESTIGATIONS

The following sections provide a summary of previous environmental investigations at the Site, particularly in regard to the former pipe fabrication activities at the Site.

6.1 Phase I Environmental Site Assessment and Limited Subsurface Investigation Report (Ramboll, 2020)

Ramboll conducted a Phase I ESA and limited subsurface investigation at the Site in 2020. At the time of the assessment, the Site was occupied by Southland Pipe Corporation, a pipe fabrication facility, and was developed with two office trailers and the current industrial (machine shop) building.

During the Site reconnaissance, Ramboll observed use of powdered cement, diesel, water-based coolant, motor oil, diesel exhaust fluid, paints and epoxies, propane, and compressed welding gases. One 1,000-gallon diesel AST and dispenser were observed on the northeast side of the machine shop building. The AST was observed inside a steel secondary containment unit and on a concrete pad. No staining was observed on the concrete pad. Three 55-gallon drums, used to store diesel exhaust fluid, motor oil, and water-based coolant, were observed on a concrete pad next to the diesel AST. Minor staining was noted on the concrete floor adjacent to the motor oil and diesel exhaust fluid drums. Soil discoloration was observed in the vicinity of the AST, possibly originating from leaks during fueling. Staining in this area was also noted in inspection records obtained from the SBCFD. The diesel AST and fueling operations were identified as an Area of Concern (AOC). Minor staining was also observed on the concrete floor of the machine shop, potentially from equipment oil leaks, near a band saw area. The staining observed near the band saw equipment and machine shop were identified as an AOC. Several 5-gallon containers of paint and epoxies were observed in a former painting area located on the northeastern portion of the Site. Black staining was observed on the surface of the concrete pad of the former painting area. The former painting area was identified as an AOC. A wash out trough was observed on the northeast portion of the Site. The trough was described as a closed-loop, concrete-paved washout pit and was no longer in operation. The trough was previously used to store contained water and excess cement dust generated from pipe coating.

6.1.1 Limited Subsurface Investigation

Ramboll conducted a limited subsurface investigation at the AOCs in order to determine if soil had been impacted by industrial operations. A total of nine soil borings (RSB1 through RSB9) were advanced in the AOCs to maximum depths of 5 or 15 feet bgs. Sampling results were compared to USEPA Regional Screening Levels (RSLs) for commercial land use and DTSC Human Health Risk Assessment (HHRA) Human and Ecological Risk Office (HERO) Note 3 Screening Levels (SLs) for commercial/industrial land use. Analyses for organochlorine pesticides (OCPs) was included in the scope of this investigation.

Former Painting Area

Borings RSB1 through RSB3 were located in the former painting area. Soil samples at this location were collected at 0.5, 2, and 5 feet bgs and were analyzed for semi-volatile organic compounds (SVOCs), VOCs, and heavy metals.

- Acenapthene, pyrene, benzo(a) anthracene, benzo(b) fluoranthene, benzo(k) fluoranthene, bonzo(g,h,i) perylene, benzo(a) pyrene, chrysene, dibenz(a,h) anthracene, fluoranthene,

phenanthrene, and indeno (1,2,3-cd) pyrene were detected at RSB2 and/or RSB3. The concentrations detected were below their respective USEPA RSLs and DTSC SLs.

- Ethylbenzene and xylenes were detected at RSB1; however, these concentrations were below their respective USEPA RSLs and DTSC SLs.

- Arsenic, barium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, silver, vanadium, and zinc were detected. Except for arsenic, all concentrations detected were below their respective USEPA RSLs and DTSC SLs. Arsenic was detected at 6.3 mg/kg in one sample (RSB1-2), below its regional background concentration of 12 mg/kg.

Drum Storage and Diesel Dispensing

Borings RSB4 and RSB5 were located in the drum storage and diesel dispensing area. Soil samples at this location were collected at 0.5, 2, 5, 10, and 15 feet bgs and were analyzed for total petroleum hydrocarbon by carbon chain (TPH-cc), VOCs, and heavy metals.

- TPH as gasoline (TPH-g), diesel fuel (TPH-d), and motor oil (TPH-o) were not reported above laboratory detection limits.

- VOCs were not reported above laboratory detection limits.

- Arsenic, barium, cadmium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc were detected. Except for arsenic, all concentrations detected were below their respective USEPA RSLs and DTSC SLs. Arsenic was detected at 6.7 mg/kg in one sample (RSB5-2), below its regional background concentration of 12 mg/kg.

Band Saw Location

Boring RSB6 was located in the Band Saw Location where floor staining had been observed. Soil samples at this location were collected at 0.5, 2, and 5 feet bgs and were analyzed for VOCs.

- VOCs were not reported above laboratory detection limits.

Machine Shop

Borings RSB7 through RSB9 were located in the machine shop where floor staining had been observed. Soil samples at this location were collected at 0.5, 2, and 5 feet bgs and were analyzed for TPH-cc, VOCs, and heavy metals.

- TPH-g, TPH-d, and TPH-o were not reported above laboratory detection limits in any of these samples.

- Methylene chloride was detected at 1.3 µg/kg at RSB8-0.5, below screening levels. No other VOCs were not reported above laboratory detection limits.

- Barium, cadmium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc were detected. All concentrations detected were below their respective USEPA RSLs and DTSC SLs.

Summary

TPH, VOCs, and SVOCs were not detected in any samples above their respective screening levels. Of the metals detected, only arsenic was detected above the corresponding screening level (in two samples); however, these concentrations were below the established regional background concentration (Bradford, 1996). Based on these findings, evidence of a release was not identified and no further investigations were recommended.

Based on the proposed redevelopment of the Site and potential for unidentified soil impacts, Ramboll recommended implementation of a soils management plan (SMP).

The historical agricultural use of the site and potential use of pesticides and other agricultural chemicals was identified as *de minimis* condition.

7. DATABASE RECORDS REVIEW

7.1 Standard Environmental Record Sources

According to ASTM Standard E1527-13, the purpose of reviewing regulatory records is to obtain and review records that will help identify *recognized environmental conditions* in connection with the Site. In addition, some records to be reviewed pertain not only to the Site, but also to properties within an additional "approximate minimum search distance" in order to help assess the likelihood of problems from migrating hazardous substances or petroleum products. The basis of the "approximate minimum search distance" is the Site boundary.

Roux retained EDR of Shelton, Connecticut to provide an ASTM Radius Map Report (EDR Report) for this Site. This report is a computerized search of select state and federal environmental databases that identify various properties with a record of environmental activity. Roux reviewed the report and summarized the relevant findings in the following sections. A copy of the compiled EDR Report has been included as Appendix F. The EDR report includes a detailed description of each of the databases searched, providing a summary of the type of information provided by each. A summary of Roux' review of the EDR Report listings is provided in Table 1.

The following section describes the findings of the database search. Roux used professional judgement in determining which EDR-listed sites to include in the narrative of this report. Facilities adjoining the Site were included due to their proximity to the Site and the potential for surface water discharges (e.g., storm water runoff, surface water effluent discharges) to enter the Site or through the migration of groundwater. Sites with listings indicative of a release (e.g., SHWS, LUST, RELEASE) are likewise discussed below. Nonadjacent facilities with database listings not necessarily indicative of a release (hazardous waste generator, FINDS, ECHO, NPDES, HAZNET, AST, or UST) will not be discussed unless considered potentially relevant in context of the Phase I ESA.

7.1.1 Site (Target Property)

Address	Owner/Operator	Database(s)
1230 West Durst Drive	Southland Pipe Corporation/ Southland Pipe Fabricators	RCRA NONGEN/NLR, HWTS, NPDES, San Bern. Co. Permit, CIWQS, CERS, FINDS, ECHO

Southland Pipe Corporation was listed in the RCRA NONGEN/NLR, HWTS, NPDES, San Bern. Co. Permit, CIWQS, CERS, FINDS, ECHO databases.

- No hazardous wastes or violations were noted in the RCRA NONGEN/NLR listing. The HWTS listing did not indicate any hazardous waste generation and no wastes were listed in the HWTS online database. The San Bernardino County Permit listing identifies active and inactive permits, issued by the San Bernardino County Fire Department, for hazardous materials, conditionally exempt small quantity generator, and waste-generating recycler (on-site). Several administrative violations, identified by the San Bernardino County Fire Department, are noted in the CERS listing. All noted violations returned to compliance. The CIWQS listing indicate a stormwater construction permit was

issued in 2001 and terminated in 2002. The NPDES listing identified an active industrial stormwater permit.

7.1.2 Adjoining and Nearby Properties

Discussions of adjoining and nearby properties of potential environmental concern as noted in Table 1 are provided below.

- **Solomon Colors and West Coast Steel & Processing DBA Mission Metals (1251 West Durst Drive)**, located adjacent to the south, were identified in the RCRA NONGEN/NLR, San Bern. Co. Permit, HWS, CERS HAZ WASTE, NPDES, CIWQS, and CERS databases. According to the RCRA listing, Mission Metals operated as a manufacturer of and industrial refrigeration equipment. No violations were noted in the RCRA listing. Mission Metals was also listed as an active permit site for generation of industrial storm water. Solomon Colors was identified as an inactive hazardous materials handler and hazardous waste generator. No hazardous wastes were listed. Based on the lack of documented release, this facility is not expected to represent a significant environmental concern in the context of this Phase I ESA.

- **Martinez & Turek Inc. and Farr Company Rialto Plant (300 South Cedar Avenue)**, located adjacent to the west, were identified in the RCRA NONGEN/NLR, RCRA-SQG, HWTS, and HAZNET databases. Martinez & Turek Inc. was identified as a manufacturer of household refrigerator and home freezers in the RCRA-NONGEN database. No violations were noted. Farr Company Rialto Plant (Farr Company) was identified as a manufacturer of ventilation, heating, air-conditioning, and commercial refrigeration equipment in the RCRA-SQG database. No violations were noted. Wastes generated by Farr Company include unspecified solvent mixture, other organic solids, and waste oil and mixed oil. Based on the lack of documented release, this facility is not expected to represent a significant environmental concern in the context of this Phase I ESA.

- **State Pipe & Supply Inc. (183 South Cedar Avenue)**, located adjacent to the north, was identified in the RCRA NONGEN/NLR database. No hazardous wastes were listed in the RCRA listing. Based on the lack of documented release, this facility is not expected to represent a significant environmental concern in the context of this Phase I ESA.

- **SM Logistics Rialto, LLC and Toys R Us Distribution Center (1110 West Merrill Avenue)**, located adjacent to the east, was identified in the RCRA-NONGEN/NLR, HWTS, HAZNET, SWEEPS UST, CA FID UST, UST, AST, CERS TANKS, CHMIRS, CIWQS, NPDES, San Bern. Co. Permit, WDS, and CERS databases. No generated wastes were noted in the RCRA listings. According to the tank listings, this site has been equipped with one 12,000-gallon diesel UST and one 1,000-gallon diesel UST. Information regarding the removal of UST systems was not provided. No information regarding aboveground tanks was provided in the listings. Based on the information reviewed by Roux, this UST facility has not been the subject of subsurface investigation and no documented releases have been reported. Moreover, during their Site reconnaissance, Roux did not observe any indications of subsurface investigation at the former UST facility, such as patched borings or monitoring well vaults. Based on the available information, Roux considers the former UST facility to be an OEF in the context of the Phase I ESA. The remaining listings are associated with hazardous waste generation or stormwater permits and are not expected to represent a significant environmental concern.

- **D&M Drum Co (137 Lilac Avenue)**, located approximately 0.91 mile to the east, was identified in the RESPONSE, ENVIROSTOR, and HIST CAL-SITES databases. This facility was identified as an inactive ENVIROSTOR site, for a release of metals and VOCs to soil and soil vapor. No groundwater impacts were noted. According to records obtained from the DTSC EnviroStor website, the anticipated depth to groundwater in the vicinity of the site is 180 to 220 feet bgs. Based on the distance to the Site and media impacted (soil and soil vapor only), this nearby release site is not expected to represent a significant environmental concern in the context of this Phase I ESA.

- **Sales Unlimited Inc. (491 West Rialto Avenue)**, located approximately 0.92 mile to the east, was identified in the ENVIROSTOR database. This facility was identified as an inactive ENVIROSTOR site, for a release of tetrachloroethylene to soil and soil vapor. No groundwater impacts were noted. Based on the distance to the Site and media impacted (soil only), this nearby release site is not expected to represent a significant environmental concern in the context of this Phase I ESA.

7.1.3 Orphan Sites

The EDR Report includes a section addressing "Orphan Sites." Orphan sites are sites, which, due to incomplete geographic location data, incomplete address information or incorrect address information, cannot be plotted correctly. The database report identified six unmapped facilities. Based on their relative distance to the Site and/or lack of a documented release, these unmapped facilities are not expected to represent a significant environmental concern.

8. FINDINGS

Roux has performed this Phase I ESA in general compliance with the scope and limitations of ASTM Standard Practice E1527-13. Roux separated the findings of this assessment into the following four categories: *recognized environmental conditions*, *controlled recognized environmental conditions*, *historical recognized environmental conditions* and *other environmental features*.

8.1 Data Gaps

During conduct of this ESA, the following data gaps, as defined in ASTM Standard E1527-13 were identified:

- The timing of the report did not allow for all contacted agencies to respond to the records requests issued. This data gap is not considered significant due to sufficient information available from previous environmental reports, the EDR report, and city, county, and state websites.
- Previous Site owners/operators were not available for an interview. This data gap is not considered significant due to sufficient information regarding Site history available from EDR historical documents and FOIA requests.

8.2 Recognized Environmental Conditions

Roux did not identify known or suspected RECs in connection with the current and historical operations at the Site.

8.3 Controlled Recognized Environmental Conditions

Roux did not identify known or suspected cRECs in connection with the current and historical operations at the Site

8.4 Historical Recognized Environmental Conditions

Roux did not identify known or suspected hRECs in connection with the current and historical operations at the Site or adjacent properties.

8.5 Other Environmental Features

OEFs are environmental conditions that do not meet the definition of a REC, cREC, or hREC, but which may warrant mention in a comprehensive Phase I ESA. Based on the subject Phase I ESA, Roux identified the following OEFs at or in the vicinity of the Site. To the extent possible, the locations of the OEFs are shown in Figure 2.

OEF 1 – Historical Agricultural Use. According to historical sources, the Site was used for agricultural purposes (row crops) as early as 1938 through approximately 1980. It is likely that agricultural chemicals were used on-Site. Based on a review of aerial photographs, the Site does not appear to have been developed with orchards, which would indicate that the agricultural chemicals were not used as heavily making potential impacts less likely. A limited soil investigation conducted at the Site in 2020 did not identify metals above action levels or regional background concentrations. Based on the available information, Roux considers the historical agricultural use to be an OEF in the context of the Phase I ESA. No sampling is recommended.

OEF 2 – Adjoining Railroad. According to historical sources and site observations, the northern adjoining railroad was constructed by 1896. The materials historically transported along the railroad are unknown. Both the presence of these railroad lines and the materials transported along the railroad lines may have potentially impacted the subsurface at the Site. Railroad ties have historically and are presently treated with copper arsenate, creosote (which contains polycyclic aromatic hydrocarbons [PAHs], polychlorinated biphenyls (PCBs), pentachlorophenol (which also contains dioxins), and copper naphthalene. In addition to these chemicals, railway transportation is associated with heavy metals, herbicides, pesticides, volatile organic compounds (VOCs), and petroleum product impacts. No evidence of a likely release associated with the rail lines was identified during the course of the Phase I ESA. Based on the available information, Roux considers the adjoining railroad to be an OEF in the context of the Phase I ESA. No sampling is recommended.

OEF 3 – Adjoining UST Facility. SM Logistics Rialto, LLC (1110 West Merrill Avenue), located adjacent to the east, was identified as a UST facility, as discussed below in Section 7.1.2. Based on the information reviewed by Roux, this UST facility has not been the subject of subsurface investigation and no documented releases have been reported. Moreover, during their Site reconnaissance, Roux did not observe any indications of subsurface investigation at the former UST facility, such as patched borings or monitoring well vaults. Based on the available information, Roux considers the former UST facility to be an OEF in the context of the Phase I ESA. No sampling is recommended.

9. REFERENCES

American Society for Testing Materials (ASTM) *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E 1527-13)

EDR, *The EDR Radius Map™ Report with GeoCheck®*, March 5, 2021

EDR, *The EDR Aerial Photo Decade Package*, March 5, 2021

EDR, *EDR Historical Topo Map Report*, March 5, 2021

EDR, *Certified Sanborn Map Report*, March 5, 2021

EDR, *The EDR-City Directory Image Report*, March 8, 2021

EDR, *EDR Environmental Lien and AUL Search*, March 8, 2021

EDR, *EDR Building Permit Report*, March 5, 2021

Bradford, G.R., et al. *Background Concentrations of Trace and Major Elements in California Soils. University of California, Division of Agriculture and Natural Resources*. March 1996.

Jacobs Engineering Group (Jacobs), *Second Semiannual 2020 Groundwater Monitoring Report, Calnev Colton Fuel Terminal, Bloomington, California*, January 2021.

GeoHydrologic Consultants, Inc. (GeoHydrologic), *Site Assessment and Closure Report, Thrifty Oil Co. Station #323, 111 West Valley Boulevard, Rialto, California*, November 2006.

Ramboll US Corporation (Ramboll), *Phase I Environmental Site Assessment and Limited Subsurface Investigation Report, Southland Pipe Corporation, 1230 West Durst Drive, Rialto, California,* September 2020.

10. SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

Roux performed this assessment in accordance with the generally accepted practices for environmental assessments at the time of implementation. Roux made a reasonable effort to ensure that the information presented in this report is materially complete and accurate.

Roux completed a Phase I ESA in general compliance with the scope and limitations of ASTM Practice E1527-13 of the industrial property located at 1230 West Durst Drive, Rialto, San Bernardino County, California.

"We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental professional as defined in §312.10 of 40 CFR 312" and,

"We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312."

Roux performed this Phase I ESA by, or under direct supervision of, the undersigned environmental professionals.

Respectfully Submitted,
ROUX ASSOCIATES, INC.

Rocio Quinones
Project Scientist

Mauricio H. Escobar, P.G.
Principal Geologist



TABLES

1. Standard Environmental Record Sources (EDR Report) Summary

Table 1: Standard Environmental Record Sources (EDR Report) Summary

1230 West Durst Drive Rialto, California 92376

Site Name	Address	Database Listings	Distance (Miles)	Direction	Discussed in Report Text
				Direction, X-Gradient	Yes/No
SOUTHLAND PIPE CORP	1230 W DURST DR	RCRA NONGEN / NLR	TP		Yes
SOUTHLAND PIPE FABRICATION PL	1230 W DURST DR	CIWQS	TP		Yes
SOUTHLAND PIPE CORP	1230 W DURST DR	HWTS	TP		Yes
SOUTHLAND PIPE CORP	1230 DURST DRIVE	NPDES,SAN BERN. CO. PERMIT,CIWQS,CERS	TP		Yes
SOUTHLAND PIPE CORP.	1230 DURST DR	FINDS,ECHO	TP		Yes
SOLOMON COLORS INC	1250 W DURST DR	CIWQS	0		
WEST COAST STEEL & PROCESSING DBA MISSION METALS	1251 DURST DR	RCRA NONGEN / NLR	0.016	SSW	Yes
SOLOMON COLORS	1251 W DURST DR	SAN BERN. CO. PERMIT	0.016	SSW	Yes
SOLOMON COLORS INC	1251 W DURST DR	HWTS,CERS HAZ WASTE,NPDES,CIWQS,CERS	0.016	SSW	Yes
FARR CO	300 S CEDAR AV	CERS HAZ WASTE,CERS TANKS,EMI,SAN BERN. CO. PERMIT,CERS	0.079	WSW	Yes
MARTINEZ & TUREK INC	300 S CEDAR AVE	RCRA NONGEN / NLR	0.079	WSW	Yes
FARR COMPANY RIALTO PLANT	300 S CEDAR AVE	HWTS,RCRA-SQG,HAZNET	0.079	WSW	Yes
CHEVRON STN #308294/2002	475 S CEDAR AVE	UST	0.106	SSW	
CHEVRON 308294	475 S CEDAR AVE	RCRA-LQG,FINDS,ECHO	0.106	SSW	
JACK IN THE BOX INC/QUICK STUFF #7730	475 S CEDAR AVE	HWTS,CERS HAZ WASTE,CERS TANKS,HAZNET,SAN BERN. CO. PERMIT,CERS	0.106	SSW	
DONALD C HUBBS, INC	150 S LARCH	SWEEPS UST,CA FID UST	0.119	NE	
SSI EXPRESS INC	150 S LARCH AVE	HWTS,HAZNET,NPDES,SAN BERN. CO. PERMIT,CIWQS,CERS	0.119	NE	
JESSE HUBBS AND SONS	150 S LARCH	HIST UST	0.119	NE	
DAVE'S AUTO BODY	1224 W MERRILL AVE	CERS HAZ WASTE,CERS	0.137	S	
DAVE'S AUTO BODY	1224 W MERRILL AVE	SAN BERN. CO. PERMIT	0.137	S	
DAVE'S AUTO BODY	1224 W MERRILL AVE	RCRA NONGEN / NLR	0.137	S	
LOPEZ AUTO ELECTRICAL REPAIR	1220 W MERRILL AVE	SAN BERN. CO. PERMIT	0.137	S	
LOPEZ AUTO ELECTRICAL REPAIR	1220 W MERRILL AVE	HWTS,CERS HAZ WASTE,HAZNET,CERS	0.137	S	
COSMOS AUTO SALES	1212 W MERRILL AVE	SAN BERN. CO. PERMIT	0.137	SSE	
HERHO GROUP CORP DBA HAN AUTO CONNECTION	1208 W MERRILL AVE	HWTS,CERS HAZ WASTE,EMI,SAN BERN. CO. PERMIT,CERS	0.137	SSE	
HERNO GROUP CORP DBA HAN AUTO CONNECTION	1208 W MERRILL AVE	RCRA NONGEN / NLR	0.137	SSE	
BOB'S AUTO SERVICE	1202 W MERRILL AVE	RCRA NONGEN / NLR	0.137	SSE	
BOB'S AUTO SERVICE	1202 W MERRILL AVE	CERS HAZ WASTE,SAN BERN. CO. PERMIT,CERS	0.137	SSE	
STATE PIPE & SUPPLY INC	183 S CEDAR AVE	RCRA NONGEN / NLR	0.145	NNW	Yes
VOGEL PROPERTIES, INC.	1314 MERRILL AVE	SAN BERN. CO. PERMIT	0.152	SSW	
GO GREEN INDUSTRIES INC	1314 W MERRILL AVE	HWTS,SAN BERN. CO. PERMIT,CIWQS,CERS	0.152	SSW	
BISSELL HOME CARE INC	181 S LARCH ST	SAN BERN. CO. PERMIT,CERS	0.163	NE	
FLEETWOOD TRAVEL TRAILERS 15	145 SOUTH LARCH AVE	HIST UST,RCRA NONGEN / NLR,EMI,WDS,CERS	0.164	NE	
SOUTHERN CALIFORNIA EDISON- SITE 003 ROOFTOP	1464 W MERRILL AVE	HWTS,HAZNET,SAN BERN. CO. PERMIT,CERS	0.19	WSW	
AMERICAN BUILDING SUPPLY INC	120 S CEDAR AVE	HWTS,SAN BERN. CO. PERMIT,CERS	0.202	NNW	
AMERICAN BUILDING SUPPLY INC	120 S CEDAR AVE	RCRA NONGEN / NLR	0.202	NNW	
SM LOGISTICS RIALTO, LLC	1110 W MERRILL AVENUE	RCRA NONGEN / NLR	0.224	SE	Yes
TOYS R US	1110 W MERRILL AVE	RCRA NONGEN / NLR	0.224	SE	Yes
SM LOGISTICS RIALTO, LLC.	1110 W MERRILL AVE	UST,AST,CHMIRS,NPDES,SAN BERN. CO. PERMIT,WDS	0.224	SE	Yes
TOYS R US DISTRIBUTION CENTER	1110 MERRILL AVE	SWEEPS UST,CA FID UST	0.224	SE	Yes
TOYS R US	1110 W MERRILL AVE	HWTS,CERS TANKS,CHMIRS,HAZNET,CIWQS,CERS	0.224	SE	Yes
MIDDLE SCHOOL NO. 6, OPTION NO. 1	CEDAR AVENUE/WEST RIALTO AVENUE	ENVIROSTOR,SCH	0.239	NNW	
ELEMENTARY SCHOOL NO. 18, OPTION NO. 5	CEDAR AVENUE/WEST RIALTO AVENUE	ENVIROSTOR,SCH	0.239	NNW	
RIALTO USD - RIALTO MIDDLE SCHOOL	1262 W. RIALTO AVE	RCRA NONGEN / NLR	0.242	N	
JONES SAW SERVICE, INC.	1111 W RIALTO AVE E	SAN BERN. CO. PERMIT	0.244	NNE	
VERIZON WIRELESS: AMBASSADOR	1132 W RIALTO AVE	SAN BERN. CO. PERMIT,CERS	0.245	NNE	
ELEMENTARY SCHOOL NO. 29	1550-1600, 1612, 1636 WEST MERRILL AVENUE	ENVIROSTOR,SCH	0.352	WSW	
ELEMENTARY SCHOOL NO. 27	8330 LOCUST AVENUE	ENVIROSTOR,SCH	0.884	WNW	
ELEMENTARY SCHOOL NO. 32	FOOTHILL BOULEVARD/MAPLE AVENUE	ENVIROSTOR,SCH	0.894	NW	
D & M DRUM CO	137 LILAC AVENUE	RESPONSE,ENVIROSTOR,HIST CAL-SITES,DEED,CERS	0.906	ENE	Yes
SALES UNLIMITED INC.	491 W RIALTO AVE	HWTS,ENVIROSTOR,SWEEPS UST,CA FID UST,HAZNET,SAN BERN. CO. PERMIT	0.916	ENE	Yes

Notes

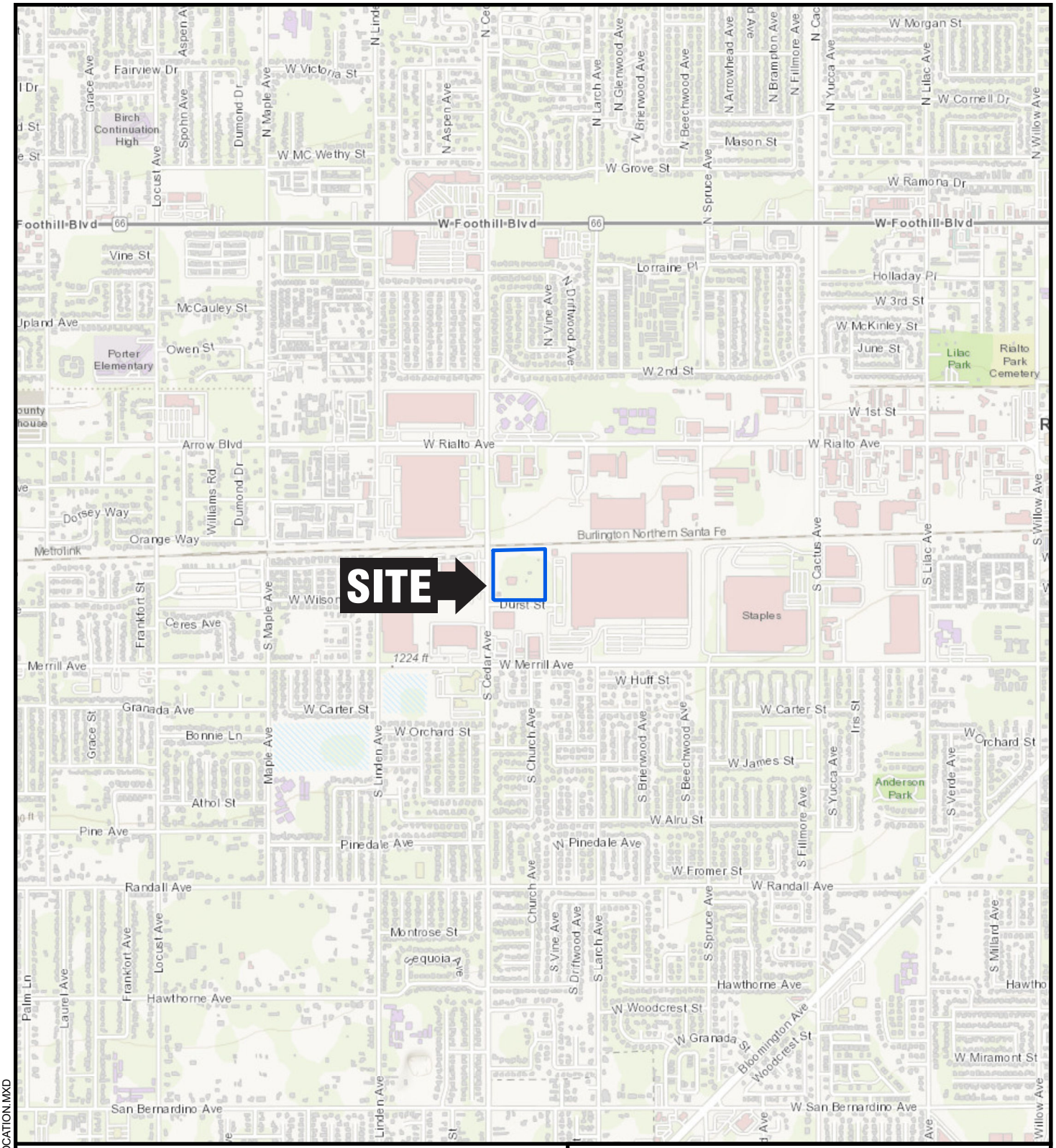
Blue: Facility does not have associated database listings indicative of a release or contamination

Green: Facility is hydraulically downgradient or crossgradient and/or is a closed release case

Orange: Facility has an associated release case impacting soil only and/or VOCs are not a potential contaminant of concern

FIGURES

1. Site Location Map
2. Site Plan



LOCATION OF DETAIL



N

2,000 0 2,000'

Title:

SITE LOCATION MAP

1230 WEST DURST DRIVE
RIALTO, CALIFORNIA 92376

Prepared for:

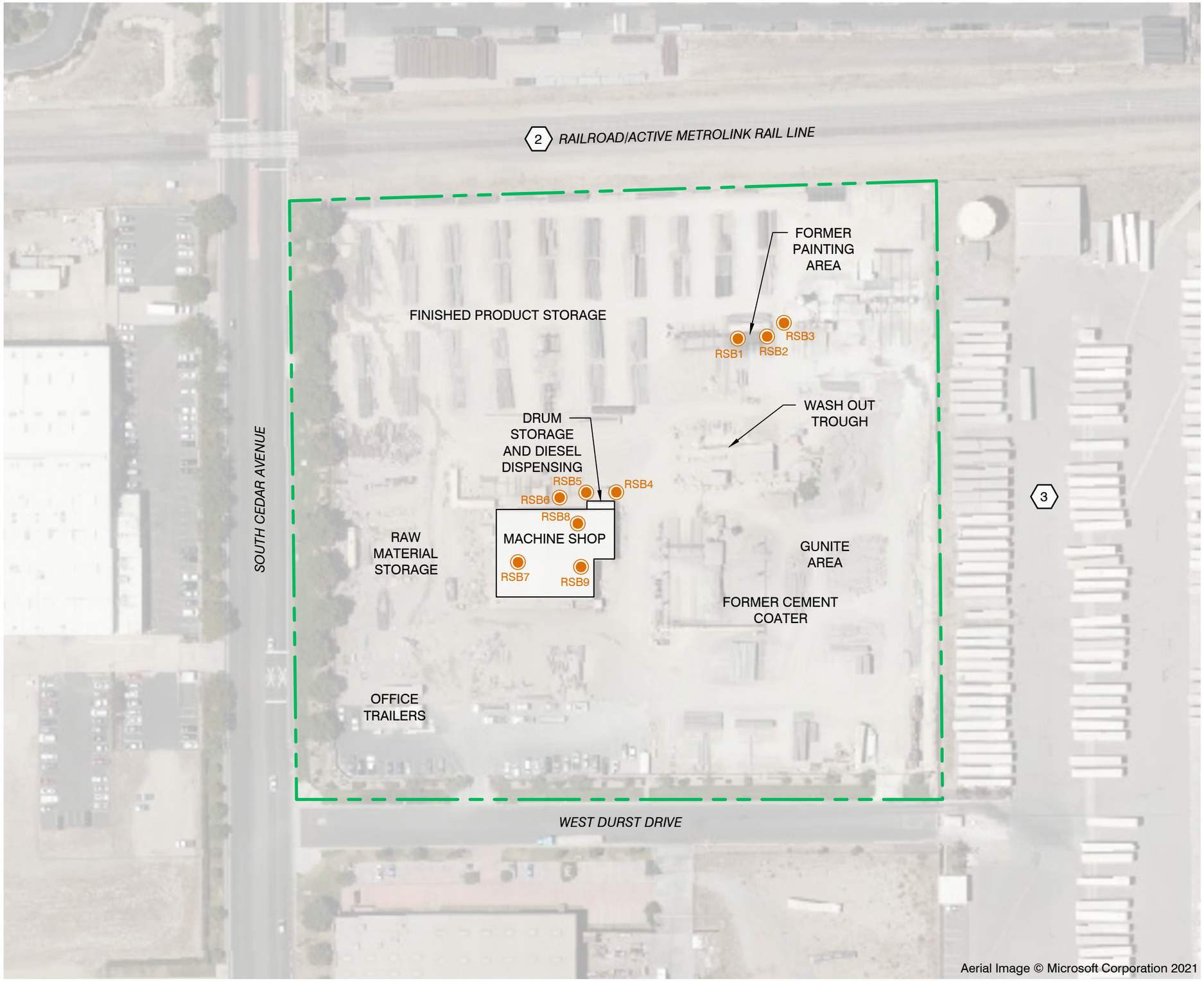
BCIF ACQUISITIONS LLC

ROUX

Compiled by: T.S.W.	Date: 03/11/21
Prepared by: T.S.W.	Scale: As Shown
Project Mgr: R.Q.	Project: 3425.0002L000
File: Figure 1 - Site Location.mxd	

FIGURE 1

S:\GIS\PROJECTS\3200\0005L\100\FIGURE 1 - SITE LOCATION.MXD



LEGEND

- APPROXIMATE SITE BOUNDARY
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- 1 — OTHER ENVIRONMENTAL FEATURE (OEF) 1 - HISTORICAL AGRICULTURAL USE (NOT SHOWN)
- 2 — OEF 2 - ADJACENT RAIL LINE
- 3 — OEF 3 - ADJOINING UST FACILITY
- RSB1 — APPROXIMATE SOIL BORING LOCATION (RAMBOLL, 2020)

N

100' 0 100'

Title:

SITE PLAN

1230 WEST DURST DRIVE
RIALTO, CALIFORNIA

Prepared for:

BCIF ACQUISITIONS, LLC

ROUX

Compiled by: A.F.	Date: 29MAR2021	FIGURE
Prepared by: A.F.	Scale: AS SHOWN	2
Project Mgr: M.N.	Project: 3200.0005L000	
File: 001_3200.0005L_SITE PLAN.DWG		

S:\CLIENTS\3200.0005L_BLACK CREEK_RIALTO_MHE\10CAD\001_3200.0005L_SITE PLAN.DWG

APPENDICES

A. Glossary of Terms

B. Historical Topographic Maps

C. Historical Aerial Photographs

D. Certified Sanborn Report

E. EDR City Directory Image Report

F. EDR Radius Map Report with Geocheck®

G. Photographic Log

H. Pertinent Historical Documentation

APPENDIX A

Glossary of Terms

GLOSSARY OF KEY TERMS

This appendix provides definitions, description of terms, and a list of acronyms for many of the words used in ASTM E 1527-13. These terms are an integral part of ASTM E 1527-13 and are critical to understanding ASTM E 1527-13 and its use.

DEFINITIONS:

Abandoned Property – *property* that can be presumed to be deserted, or an intent to relinquish possession or control can be inferred from the general disrepair or lack of activity thereon such that a reasonable person could believe that there was an intent on the part of the current *owner* to surrender rights to the *property*.

Activity and Use Limitations – Legal or physical restrictions or limitations on the use of, or access to, a site or facility: *(1)* to reduce or eliminate potential exposure to *hazardous substances* or *petroleum products* in the soil, soil vapor, groundwater, and/or surface water on the *property*, or *(2)* to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions, which may include institutional and/or *engineering controls*, are intended to prevent adverse impacts to individuals or populations that may be exposed to *hazardous substances* and *petroleum products* in the soil, soil vapor, groundwater, and/or surface water on the *property*.

Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) – The list of sites compiled by EPA that EPA has investigated, or is currently investigating, for potential hazardous substance contamination for possible inclusion on the National Priorities List.

Construction debris – Concrete, brick, asphalt, and other such building materials discarded in the construction of a building or other improvement to property.

Contaminated public wells – Public wells used for drinking water that have been designated by a government entity as contaminated by toxic substances (for example, chlorinated solvents), or as having water unsafe to drink without treatment.

Contiguous Property Owner Liability Protection – a person may qualify for the *contiguous property owner liability protection* if, among other requirements, such person owns real *property* that is contiguous to, and that is or may be contaminated by *hazardous substances* from other real *property* that is not owned by that person. Furthermore, such person conducted *all appropriate inquiries* at the time of acquisition of the *property* and did not know or have reason to know that the *property* was or could be contaminated by a *release* or threatened *release* from the contiguous *property*. The *all appropriate inquiries* must not result in knowledge of contamination. If it does, then such person did “know” or “had reason to know” of contamination and would not be eligible for the *contiguous property owner liability protection*.

Controlled Recognized Environmental Condition – a *recognized environmental condition* resulting from a past *release* of *hazardous substances* or *petroleum products* that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with *hazardous substances* or *petroleum products* allowed to remain in place subject to the implementation of required controls (for example, *property* use restrictions, *activity and use limitations*, *institutional controls*, or *engineering controls*).

CORRACTS list – a list maintained by EPA of *hazardous waste* treatment, storage, or disposal facilities and other RCRA-regulated facilities (due to past interim status or storage of *hazardous waste* beyond 90 days)

that have been notified by the U.S. Environmental Protection Agency to undertake corrective action under RCRA. The *CORRACTS list* is a subset of the EPA database that manages RCRA data.

Demolition debris – Concrete, brick, asphalt, and other such building materials discarded in the demolition of a building or other improvement to property.

Drum – A container (typically, but not necessarily, holding 55 gal (208 L) of liquid) that may be used to store *hazardous substances* or *petroleum products.*

Dry wells – Underground areas where soil have been removed and replaced with pea gravel, coarse sand, or large rocks. Dry wells are used for drainage, to control storm runoff, for the collection of spilled liquids (intentional and non-intentional), and wastewater disposal (often illegal).

Dwelling – Structure of portion thereof used for residential habitation.

Engineering controls – Physical modifications to a site or facility (for example, capping, slurry walls, or point of use water treatment) to reduce or eliminate the potential for exposure to contaminants in the soil or groundwater on the property.

Environmental lien – A charge, security, or encumbrance upon title to a *property* to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of *hazardous substances* or *petroleum products* upon a *property*, including (but not limited to) liens imposed pursuant to CERCLA 42 USC § 9607(1) and similar state or local laws.

ERNS list – EPA's emergency response notification system list of reported CERCLA hazardous substance releases or spills in quantities greater than the reportable quantity, as maintained at the National Response Center. Notification requirements for such releases or spills are codified in 40 CFR parts 302 and 355.

Federal Register (FR) – Publication of the Untied States government published daily (except for federal holidays and weekends) containing all proposed and final regulations and some other activities of the federal government. When regulations become final, they are included in the Code of Federal Regulations (CFR), as well as published in the Federal Register.

Fire insurance maps – Maps produced for private fire insurance map companies that indicate uses of properties at specified dates and that encompass the property. These maps are often available in local libraries, historical societies, private resellers, or from the map companies who produced them. See Question 23 of the transaction screen process in Practice E 1528 and 7.3.4.2 of this practice.

Hazardous substance – A substance defined as hazardous pursuant to CERCLA 42 USC § 9601(14), as interpreted by EPA regulations and the courts: "(A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Soil Waste Disposal Act (42 USC § 6921) (but not including any waste the regulation of which under the Solid Waste Disposal Act (42 USC § 6901 *et seq.*) has been suspended by Act of Congress), (D) any toxic pollutant listed under section 1317(a) of Title 33, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act (42 USC § 7412), and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator (of EPA) has taken action pursuant to section 2606 of Title 15. The term does not include petroleum, including crude oil or any fraction thereof, which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A)

through (F) of this paragraph; the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas)."

Hazardous waste – Any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Cat (42 USC § 6921) (but not including any waste the regulation of which under the Solid Waste Disposal Act (42 USC § 6901 *et seq.*) has been suspended by Act of Congress). The Solid Waste Disposal Act of 1980 amended RCRA. RCRA defines hazardous waste, in 42 USC § 6903, as: "a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may – (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed."

Institutional control – A legal or administrative restriction (e.g., deed restriction, restrictive zoning) on the use of, or access to, a site or facility to reduce or eliminate potential exposure to contaminants in the soil or groundwater on the property.

Landfill – A place, location, tract of land, area, or premises used for the disposal of solid wastes as defined by state solid waste regulations. The term is synonymous with the term *solid waste disposal site* and is also known as a garbage dump, trash dump, or similar term.

Local street directories – Directories published by private (or sometimes government) sources that show ownership, occupancy, and/or use of sites by reference to street addresses. Often, local street directories are available at libraries of local governments, colleges or universities, or historical societies.

Material safety data sheet (MSDS) – Written or printed material concerning a hazardous substance which is prepared by chemical manufacturers, importers, and employers for hazardous chemicals pursuant to OSHA's Hazard Communication Standard, 29, CFR 1910.1200.

National Contingency Plan (NCP) – The National Oil and Hazardous Substances Pollution Contingency Plan, found at 40 CFR § 300, that is the EPA's blueprint on how hazardous substances are to be cleaned up pursuant to CERCLA.

National Priorities List (NPL) – List compiled by the EPA, pursuant to CERCLA 42 USC § 9605(a)(8)(B), of properties with the highest priority for cleanup pursuant to EPA's Hazard Ranking System. See 40 CFR Part 300.

Occupants – Those tenants, subtenants, or other persons or entities using the *property* or a portion of the *property.*

Owner – Generally the fee owner of record for the *property*.

Petroleum exclusion – The exclusion from CERCLA liability provided in 42 USC § 9601(14), as interpreted by the courts and EPA: "The term (hazardous substance) does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas)."

Petroleum products – Those substances included within the meaning of the *petroleum exclusion* to CERCLA, 42 USC § 9601(14), as interpreted by the courts and EPA, that is: petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under Subparagraphs (A) through (F) of 42 USC § 9601(14), natural gas, natural gas liquids, liquefied natural gas, and synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). (The word fraction refers to certain distillates of crude oil, including gasoline, kerosene, diesel oil, jet fuels, and fuel oil, pursuant to *Standard Definitions of Petroleum Statistics*[1]*.)*

Phase I Environmental Site Assessment – The process described in this practice.

Pits, ponds, or lagoons – Man-made or natural depressions in the ground surface that are likely to hold liquids or sludge containing *hazardous substances* or *petroleum products*. The likelihood of such liquids or sludge being present is determined by evidence of factors associated with the pit, pond, or lagoon, including, but not limited to, discolored water, distressed vegetation, or the presence of an obvious wastewater discharge.

Property – The real property that is the subject of the *environmental site assessment* described in this practice. Real property includes buildings and other fixtures and improvement located on the property and affixed to the land.

Property tax files – The files kept for property tax purposes by the local jurisdiction where the property is located and includes records of past ownership, appraisals, maps, sketches, photos, or other information that is reasonable ascertainable and pertaining to the property.

RCRA generators – Those persons or entities that generate hazardous waste, as defined and regulated by RCRA.

RCRA generators list – List kept by the EPA of those persons or entities that generate hazardous wastes as defined and regulated by RCRA.

RCRA TSD facilities – Those facilities at which treatment, storage, and/or disposal of hazardous wastes takes place, as defined and regulated by RCRA.

RCRA TSD facilities list – List kept by the EPA of those facilities at which treatment, storage, and/or disposal of hazardous wastes takes place, as defined and regulated by RCRA.

Recorded land title records – Records of fee ownership, leases, land contracts, easements, liens, and other encumbrances on or of the property recorded in the place where land title records are, by law or custom, recorded for the local jurisdiction in which the *property* is located. (Often such records are kept by a municipal or county recorder or clerk.) Such records may be obtained from title companies or directly from the local government agency. Information about the title to the property that is recorded in a U.S. district court or any place other than where land title records are, by law or custom, recorded for the local jurisdiction in which the property is located, are not considered part of recorded land title records.

Records of emergency release notifications (SARA § 304) – Section 304 of EPCRA or Title III of SARA requires operators of facilities to notify their local emergency planning committee (as defined in EPCRA) and the state emergency response commission (as defined in EPCRA) of any release beyond the facility's boundary of any reportable quantity of any extremely hazardous substance. Often the local fire department is the local emergency planning committee. Records of such notifications are "Records of Emergency Release Notifications" (SARA§ 304).

Report – The written record of a transaction screen process as required by Practice E 1528 or the written report prepared by the environmental professional and constituting part of a "Phase I Environmental Site Assessment," as required by this practice.

Solid waste disposal site – A place, location, tract of land, area, or premises used for the disposal of solid wastes as defined by state solid waste regulations. The term is synonymous with the term *landfill* and is also known as a garbage dump, trash dump, or similar term.

Solvent – A chemical compound that is capable of dissolving another substance and may itself be a *hazardous substance,* used in a number of manufacturing/industrial processes including, but not limited to, the manufacture of paints and coatings for industrial and household purposes, equipment clean-up, and surface degreasing in metal fabricating industries.

State registered USTs – State lists of underground storage tanks required to be registered under Subtitle I, Section 9002 of RCRA.

Sump – A pit, cistern, cesspool, or similar receptacle where liquids drain, collect, or are stored.

TSD facility – Treatment, storage, or disposal facility (*see RCRA TSD facilities*).

Underground storage tank (UST) - Any tank, including underground piping connected to the tank, that is or has been used to contain *hazardous substances* or *petroleum products* and the volume of which is 10% or more beneath the surface of the ground.

USGS 7.5 Minute Topographic Map – The map (if any) available from or produced by the United States Geological Survey, entitled "USGS 7.5 Minute Topographic Map," and showing the property.

Wastewater – Water that (1) is or has been used in an industrial or manufacturing process, (2) conveys or has conveyed sewage, or (3) is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. Wastewater does not include water originating on or passing through or adjacent to a site, such as storm water flows, that has not been used in industrial or manufacturing processes, has not been combined with sewage, or is not directly related to manufacturing, processing, or raw materials storage areas at an industrial plant.

Zoning/land use records – Those records of the local government in which the *property* is located, indicating the uses permitted by the local government in particular zones within its jurisdiction. The records may consist of maps and/or written records. They are often located in the planning department of a municipality or county.

DEFINITIONS SPECIFIC TO ASTM E 1527-13:

Actual knowledge – The knowledge actually possessed by an individual who is a real person, rather than an entity. Actual knowledge is to be distinguished from constructive knowledge that is knowledge imputed to an individual or entity.

Adjoining properties – Any real property or properties the border of which is contiguous or partially contiguous with that of the property, or that would be contiguous or partially contiguous with that of the property but for a street, road, or other public thoroughfare separating them.

Aerial photographs – Photographs taken from an airplane or helicopter (from a low enough altitude to allow identification of development and activities) of areas encompassing the property. Aerial photographs are often available from government agencies or private collections unique to a local area.

Appropriate inquiry – That inquiry constituting "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined in CERCLA, 42 USC § 9601(35)(B), that will give a party to a *commercial real estate* transaction the *innocent landowner defense* to the CERCLA liability (42 USC § 9601(A) and (B) and § 9607(b)(3)), assuming compliance with other elements of the defense. See Appendix X1.

Approximate minimum search distance – The area for which records must be obtained and reviewed pursuant to Section 7 subject to the limitations provided in that section. This may include areas outside the *property* and shall be measured from the nearest *property* boundary. This term is used in lieu of radius to include irregularly-shaped properties.

Building department records – Those records of the local government in which the property is located indicating permission of the local government to construct, alter, or demolish improvements on the property. Often, building department records are located in the building department of a municipality or county.

Business environmental risk – A risk which can have a material environmental or environmentally-driven financial impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice. Consideration of *business environmental risk* issues may necessitate that an *environmental professional* address one or more non-scope considerations, some of which are identified in Section 12.

Commercial real estate – Any real property except a dwelling or property with no more than four dwelling units exclusively for residential use (except that a dwelling or property with no more than four dwelling units exclusively for residential use is included in this term when it has a commercial function, as in the building of such dwellings for profit). This term includes, but is not limited to, undeveloped real property and real property used for industrial, retail, office, agricultural, other commercial, medical, or educational purposes; property used for residential purposes that has more than four residential dwelling units; and any property with no more than four dwelling units for residential use when it has a commercial function, as in the building of such dwellings for profit.

Commercial real estate transaction – A transfer of title to or possession of real property or receipt of a security interest in real property, except that it does not include transfer of title to or possession of real property or the receipt of a security interest in real property with respect to an individual dwelling or building containing fewer than five dwelling units, nor does it include the purchase of a lot or lots to construct a dwelling for occupancy by a purchaser, but a commercial real estate transaction does include real property purchased or leased by persons or entities in the business of building or developing dwelling units.

Controlled Recognized Environmental Condition – a *recognized environmental condition* resulting from a past *release* of *hazardous substances* or *petroleum products* that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with *hazardous substances* or *petroleum products* allowed to remain in place subject to the implementation of required controls (for example, *property* use restrictions, *activity and use limitations*, *institutional controls*, or *engineering controls*).

Due diligence – The process of inquiring into the environmental characteristics of a parcel of *commercial real estate* or other conditions, usually in connection with a commercial real estate transaction. The degree and kind of due diligence vary for different properties and differing purposes.

Environmental audit – The investigative process to determine if the operations of an existing facility are in compliance with applicable environmental laws and regulations. This term should not be used to describe Practice E 1528 or this practice, although an environmental audit may include an *environmental site assessment* or, if prior audits are available, may be part of an environmental site assessment.

Environmental professional – A person processing sufficient training and experience necessary to conduct a *site reconnaissance, interviews,* and other activities in accordance with this practice, and from the information generated by such activities, having the ability to develop opinions and conclusions regarding *recognized environmental conditions* in connection with the *property* in question. An individual's status as an environmental professional may be limited to the type of assessment to be performed or to specific segments of the assessment for which the professional is responsible. The person may be an independent contractor or an employee of the *user.*

Environmental site assessment (ESA) – The process by which a person or entity seeks to determine if a particular parcel of real *property* (including improvements) is subject to *recognized environmental conditions.* At the option of the *user*, an environmental site assessment may include more inquiry than that constituting *appropriate inquiry* or, if the user is not concerned about qualifying for the *innocent landowner defense,* less inquiry than that constituting *appropriate inquiry.* An environmental site assessment is both different from and less rigorous than an *environmental audit.*

Fill dirt – Dirt, soil, sand, or other earth, obtained off-site, that is used to fill holes or depressions, create mounds, or otherwise artificially change the grade or elevation of real property. It does not include material that is used in limited quantities for normal landscaping activities.

Hazardous waste/contaminated sites – Sites on which a release has occurred, or is suspected to have occurred, of any *hazardous substance, hazardous waste,* or *petroleum products,* and that release or suspected release has been reported to a government entity.

Historical Recognized Environmental Condition – a past *release* of any *hazardous substances* or *petroleum products* that has occurred in connection with the *property* and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the *property* to any required controls (for example, *property* use restrictions, *activity and use limitations*, *institutional controls*, or *engineering controls*). Before calling the past *release* a *historical recognized environmental condition*, the *environmental professional* must determine whether the past *release* is a *recognized environmental condition* at the time the *Phase I Environmental Site Assessment* is conducted (for example, if there has been a change in the regulatory criteria). If the EP considers the past *release* to be a *recognized environmental condition* at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a *recognized environmental condition*.

Innocent landowner defense – That defense to CERCLA liability provided in 42 USC § 9601(35) and § 9607(b)(3). One of the requirements to qualify for this defense is that the party make "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice." There are additional requirements to qualify for this defense.

Interviews – Those portions of this practice that are contained in Section 9 and 10 thereof and address questions to be asked of *owners* and *occupants* of the *property* and questions to be asked of local government officials.

Key site manager – The person identified by the *owner* of a *property* as having good knowledge of the uses and physical characteristics of the property.

Local government agencies – Those agencies of municipal or county government having jurisdiction over the *property.* Municipal and county government agencies include, but are not limited to, cities, parishes, townships, and similar entities.

LUST sites – State lists of leaking underground storage tank sites. Section 9003 (h) of Subtitle I of RCRA gives EPA and states, under cooperative agreements with EPA, authority to clean up releases from UST systems or require owners and operators to do so.

Major occupants – Those tenants, subtenants, or other persons or entities each of which uses at least 40% of the leasable area of the *property* or any anchor tenant when the *property* is a shopping center.

Material threat – A physically observable or obvious threat which is reasonable likely to lead to a release that, in the opinion of the *environmental professional,* is threatening and might result in impact to human health and the environment. An example might include an aboveground storage tank that contains a hazardous substance and which shows evidence of damage. The damage would represent a material threat if it is deemed serious enough that it may cause or contribute to tank integrity failure with a release of contents to the environment.

Obvious – That which is plain or evident; a condition or fact that could not be ignored or overlooked by a reasonable observer while *visually* or *physically observing the property.*

Other historical sources – Any source or sources other than those designated in 7.3.4.1-7.3.4.8 that are credible to a reasonable person and that identify past uses of the property. The term includes, but is not limited to, miscellaneous maps, newspaper archives, and records in the files and/or personal knowledge of the *property owner* and/or *occupants.*

Physical setting sources – sources that provide information about the geologic, hydrogeologic, hydrologic, or topographic characteristics of a *property.*

Practically reviewable – Information that is practically reviewable means that the information is provided by the source in a manner and in a form that, upon examination, yields information relevant to the *property* without the need for extraordinary analysis of irrelevant data. The form of the information shall be such that the user can review the records for a limited geographic area. Records that cannot be feasibly retrieved by reference to the location of the *property* or a geographic area in which the *property* is located are not generally *practically reviewable.* Most databases of public records are *practically reviewable* if they can be obtained from the source agency by the county, city, zip code, or other geographic area of the facilities listed in the record system. Records that are sorted, filed, organized, or maintained by the source agency only chronologically are not generally practically reviewable. Listings in publicly available records which do not have adequate address information to be located geographically are not generally considered practically reviewable. For large databases with numerous facility records (such as RCRA hazardous waste generators and registered underground storage tanks), the records are not *practically reviewable* unless they can be obtained from the source agency in the smaller geographic area of zip codes. Even when information is provided by zip code for some large databases, it is common for an unmanageable number of sites to be

identified within a given zip code. In these cases, it is not necessary to review the impact of all of the sites that are likely to be listed in any given zip code because that information would not be *practically reviewable*. In other words, then so much data is generated that it cannot be feasibly reviewed for its impact on the *property,* it is not *practically reviewable.*

Preparer – The person preparing the *transaction screen questionnaire* pursuant to Practice E 1528, who may be either the user or the person to whom the user has delegated the preparation of the *transaction screen questionnaire.*

Publicly available – Information that is publicly available means that the source of the information allows access to the information by anyone upon request.

Reasonably ascertainable – For purposes of both this practice and Practice E 1528, information that is (1) *publicly available,* (2) obtainable from its source within reasonable time and cost constraints, and (3) *practically reviewable.*

Recognized Environmental Conditions – the presence or likely presence of any *hazardous substances* or *petroleum products* in, on, or at a *property*: (*1*) due to release to the environment; (*2*) under conditions indicative of a *release* to the *environment*; or (*3*) under conditions that pose a *material threat* of a future *release* to the *environment*. *De minimis conditions* are not *recognized environmental conditions*.

Records review – That part that is contained in Section 7 of this practice addresses which records shall or may be reviewed.

Site reconnaissance – That part that is contained in Section 8 of this practice and addresses what should be done in connection with the *site visit.* The site reconnaissance includes, but is not limited to, the *site visit* done in connection with such a Phase I Environmental Site Assessment.

Site visit – The visit to the property during which observations are made constituting the *site reconnaissance* section of this practice and the *site visit* requirement of Practice E 1528.

Standard environmental record sources – Those records specified in 7.2.1.1.

Standard historical sources – Those sources of information about the history of uses of the property specified in 7.3.4.

Standard physical setting source – A current USGS 7.5-minute topographic map (if any) showing the area on which the property is located.

Standard practice(s) – The activities set forth in either and both this practice and Practice E 1528.

Standard sources – Sources of environmental, physical setting, or historical records specified in Section 7 of this practice.

Transaction screen process – The process described in Practice E 1528.

Transaction screen questionnaire – The questionnaire provided in Section 6 of Practice E 1528.

User – The party seeking to use Practice E 1528 to perform an *environmental site assessment* of the *property*. A user may include, without limitation, a purchaser of *property,* a potential tenant of *property,* an *owner* of *property,* a lender, or a property manager.

Visually and/or physically observed – During a *site visit* pursuant to Practice E 1528, or pursuant to this practice, this term means observations made by vision while walking through a *property* and the structures located on it and observations made by the sense of smell, particularly observations of noxious or foul odors. The term "walking through" is not meant to imply that disabled persons who cannot physically walk may not conduct a *site visit;* they may do so by the means at their disposal for moving through the *property* and the structures located on it.

ACRONYMS:

CERCLA – Comprehensive Environmental Response, Compensation and Liability Act of 1980 (as amended, 42 USC § 9601 *et seq.*)

CERCLIS – Comprehensive Environmental Response, Compensation and Liability Information System (maintained by EPA)

CFR – Code of Federal Regulations

CORRACTS – Facilities subject to corrective action under RCRA

EPA – United States Environmental Protection Agency

EPCRA – Emergency Planning and Community Right to Know Act (also known as SARA Title III), 42 USC § 11001 *et seq.*)

ERNS – Emergency response notification system

ESA – Environmental site assessment (different than an *environmental audit*)

FOIA – U.S. Freedom of Information Act (5 USC 552 *et seq.*)

FR – Federal Register

LUST – Leaking underground storage tank

MSDS – Material safety data sheet

NCP – National Contingency Plan

APPENDIX B

Historical Topographic Maps

BCG Rialto

1230 W Durst Drive

Rialto, CA 92376

Inquiry Number: 6393683.4

March 05, 2021

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

03/05/21

Site Name:

BCG Rialto
1230 W Durst Drive
Rialto, CA 92376
EDR Inquiry # 6393683.4

Client Name:

Roux Associates
402 Heron Drive
Logan Township, NJ 08085-0000
Contact: Connor Moore

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Roux Associates were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# 3662

Project: BCG Rialto

Coordinates:

Latitude:	34.095555 34° 5' 44" North
Longitude:	-117.395294 -117° 23' 43" West
UTM Zone:	Zone 11 North
UTM X Meters:	463536.27
UTM Y Meters:	3772821.52
Elevation:	1231.01' above sea level

Maps Provided:

2012	1942
1980	1901
1975	1898
1973	1896
1967	
1954	
1953, 1954	
1943	

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This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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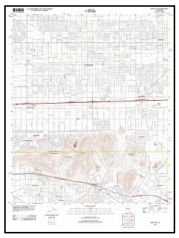
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets

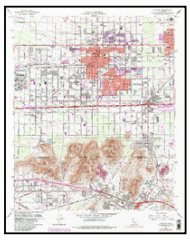


Fontana
2012
7.5-minute, 24000

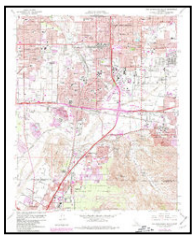


San Bernardino South
2012
7.5-minute, 24000

1980 Source Sheets

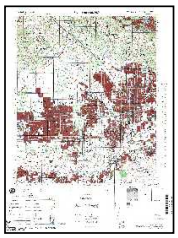


Fontana
1980
7.5-minute, 24000
Aerial Photo Revised 1978



San Bernardino South
1980
7.5-minute, 24000
Aerial Photo Revised 1979

1975 Source Sheets

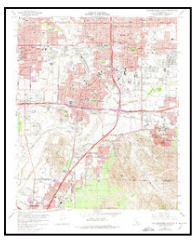


SAN BERNARDINO
1975
15-minute, 50000

1973 Source Sheets



Fontana
1973
7.5-minute, 24000
Aerial Photo Revised 1973

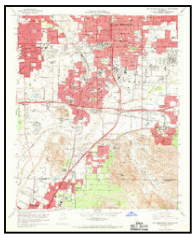


San Bernardino South
1973
7.5-minute, 24000
Aerial Photo Revised 1973

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1967 Source Sheets



San Bernardino South
1967
7.5-minute, 24000
Aerial Photo Revised 1966



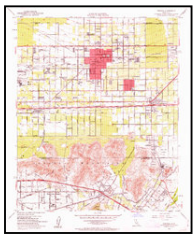
Fontana
1967
7.5-minute, 24000
Aerial Photo Revised 1966

1954 Source Sheets

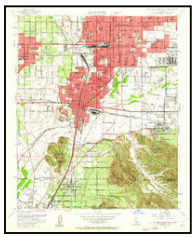


San Bernardino
1954
15-minute, 62500
Aerial Photo Revised 1952

1953, 1954 Source Sheets



Fontana
1953
7.5-minute, 24000
Aerial Photo Revised 1952



San Bernardino South
1954
7.5-minute, 24000
Aerial Photo Revised 1952

1943 Source Sheets



Colton
1943
7.5-minute, 31680

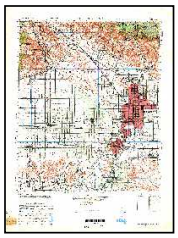


Fontana
1943
7.5-minute, 31680

Topo Sheet Key

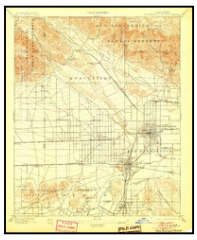
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1942 Source Sheets



SAN BERNARDINO
1942
15-minute, 50000

1901 Source Sheets



San Bernardino
1901
15-minute, 62500

1898 Source Sheets



San Bernardino
1898
15-minute, 62500

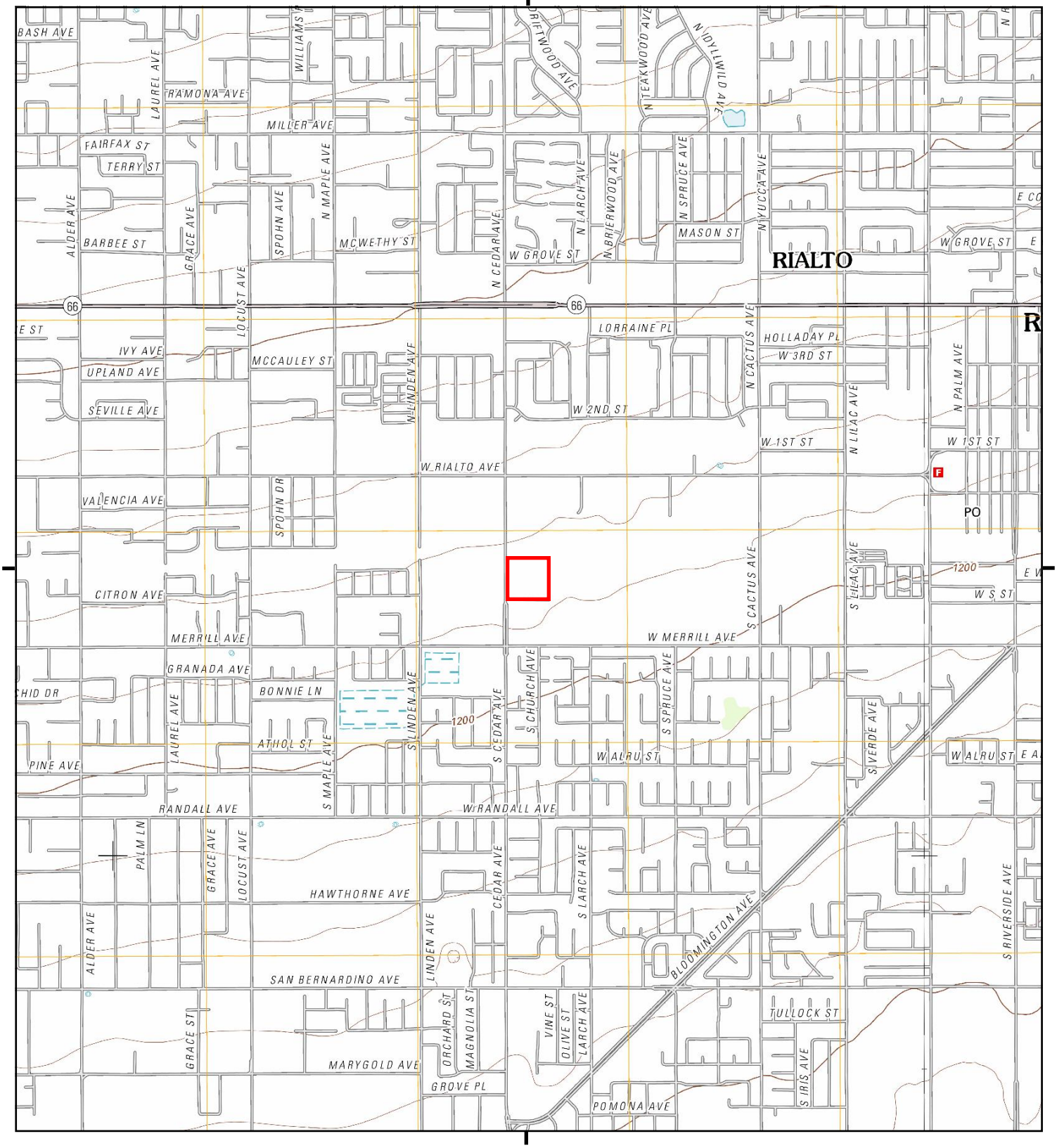
1896 Source Sheets



San Bernardino
1896
15-minute, 62500

Historical Topo Map

2012



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

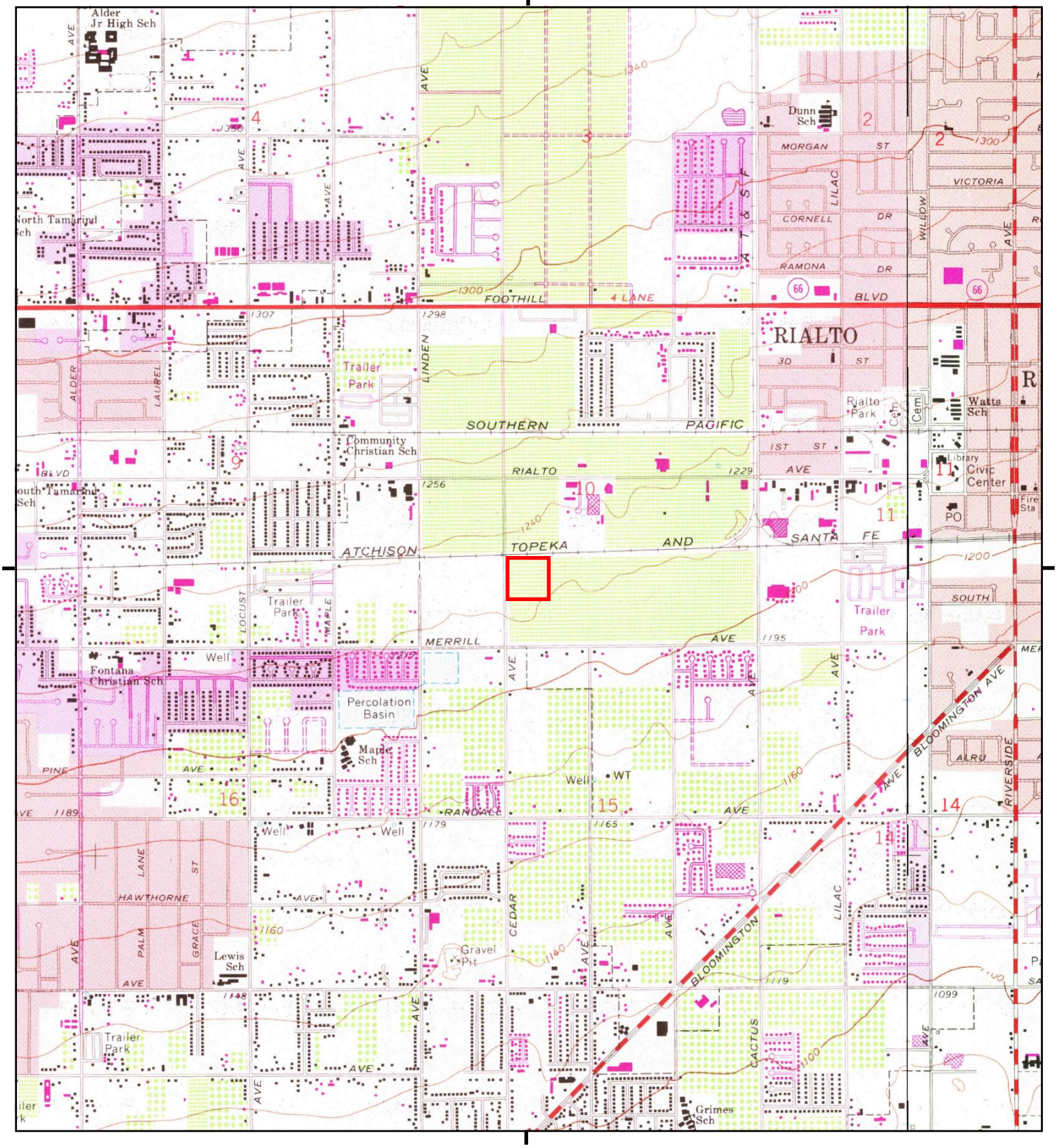
TP, Fontana, 2012, 7.5-minute
SE, San Bernardino South, 2012, 7.5-minute

SITE NAME: BCG Rialto
ADDRESS: 1230 W Durst Drive
Rialto, CA 92376
CLIENT: Roux Associates

N

Historical Topo Map

1980



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

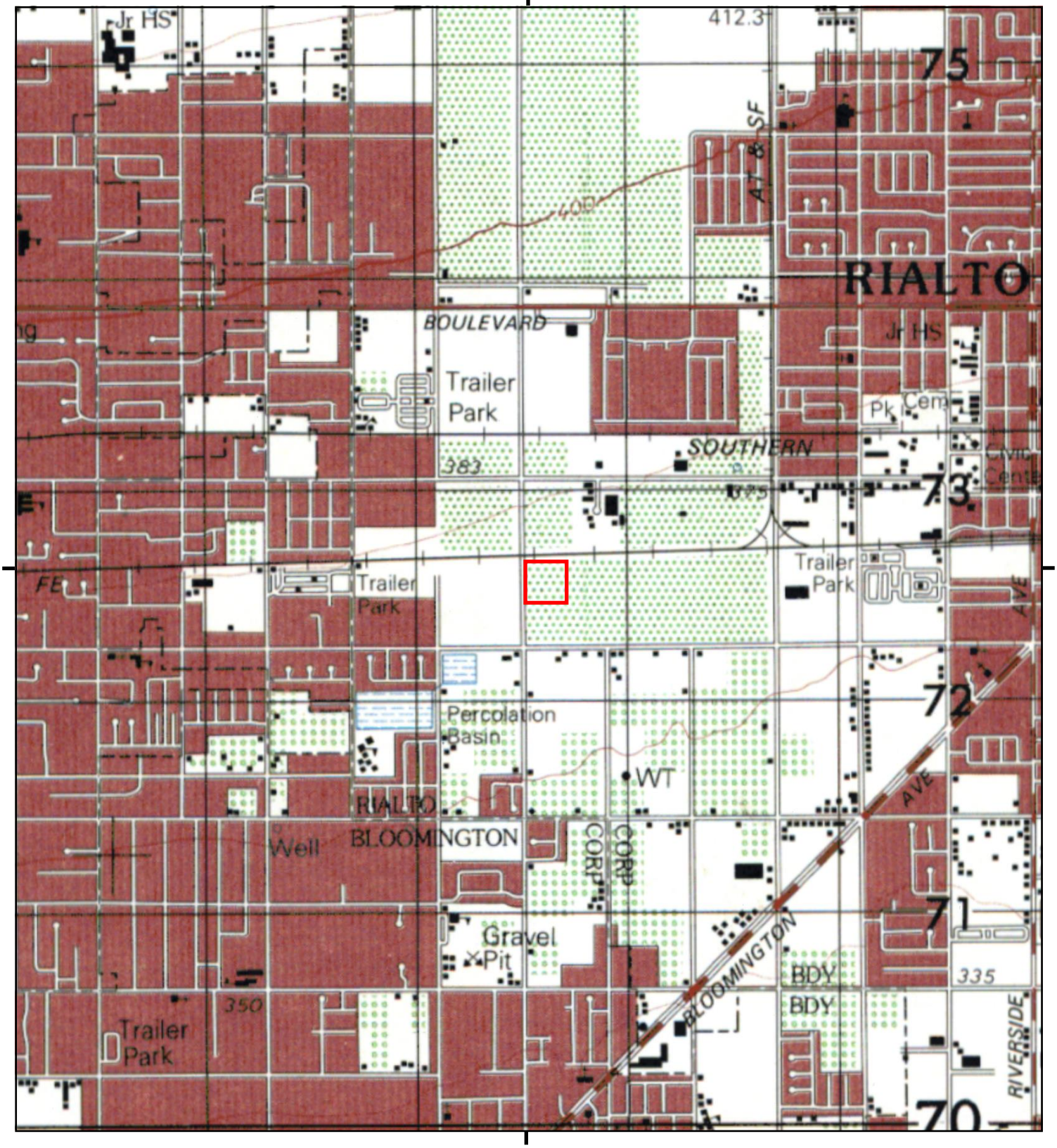
TP, Fontana, 1980, 7.5-minute
SE, San Bernardino South, 1980, 7.5-minute

SITE NAME: BCG Rialto
ADDRESS: 1230 W Durst Drive
Rialto, CA 92376
CLIENT: Roux Associates

N

Historical Topo Map

1975



This report includes information from the following map sheet(s).

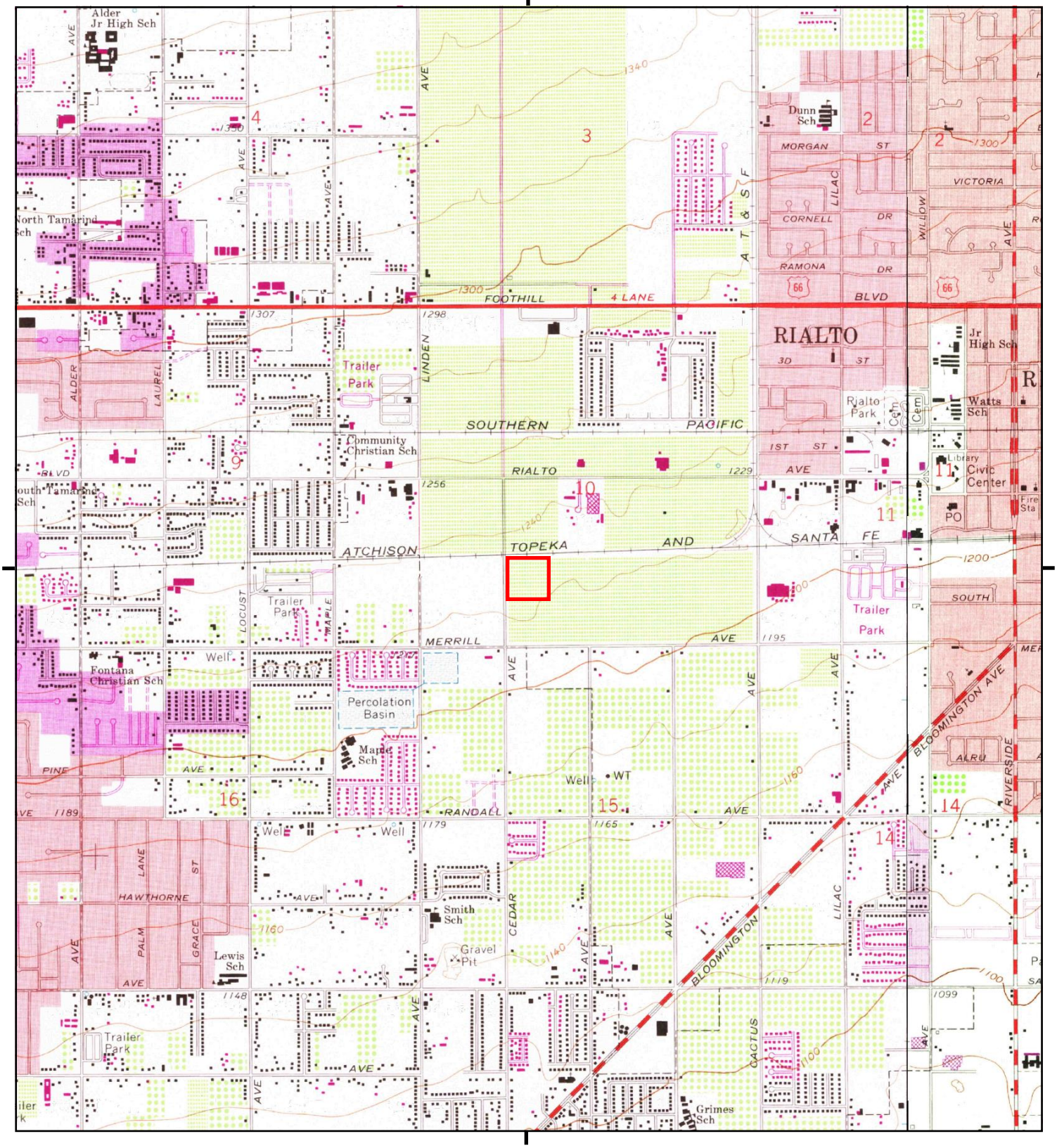
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, SAN BERNARDINO, 1975, 15-minute

SITE NAME: BCG Rialto
ADDRESS: 1230 W Durst Drive
Rialto, CA 92376
CLIENT: Roux Associates

N



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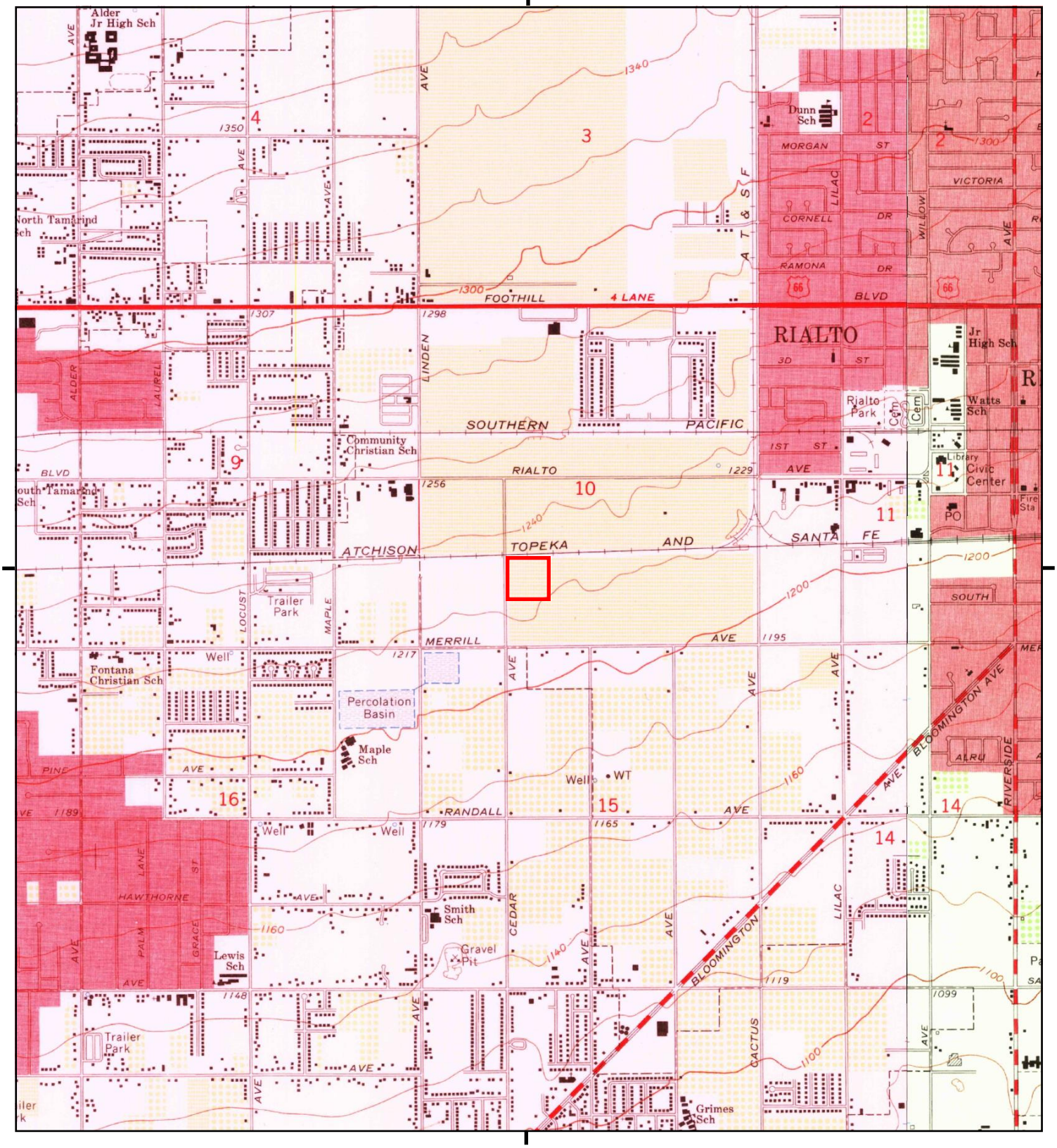
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Fontana, 1973, 7.5-minute
SE, San Bernardino South, 1973, 7.5-minute

SITE NAME: BCG Rialto
ADDRESS: 1230 W Durst Drive
Rialto, CA 92376
CLIENT: Roux Associates

N



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0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

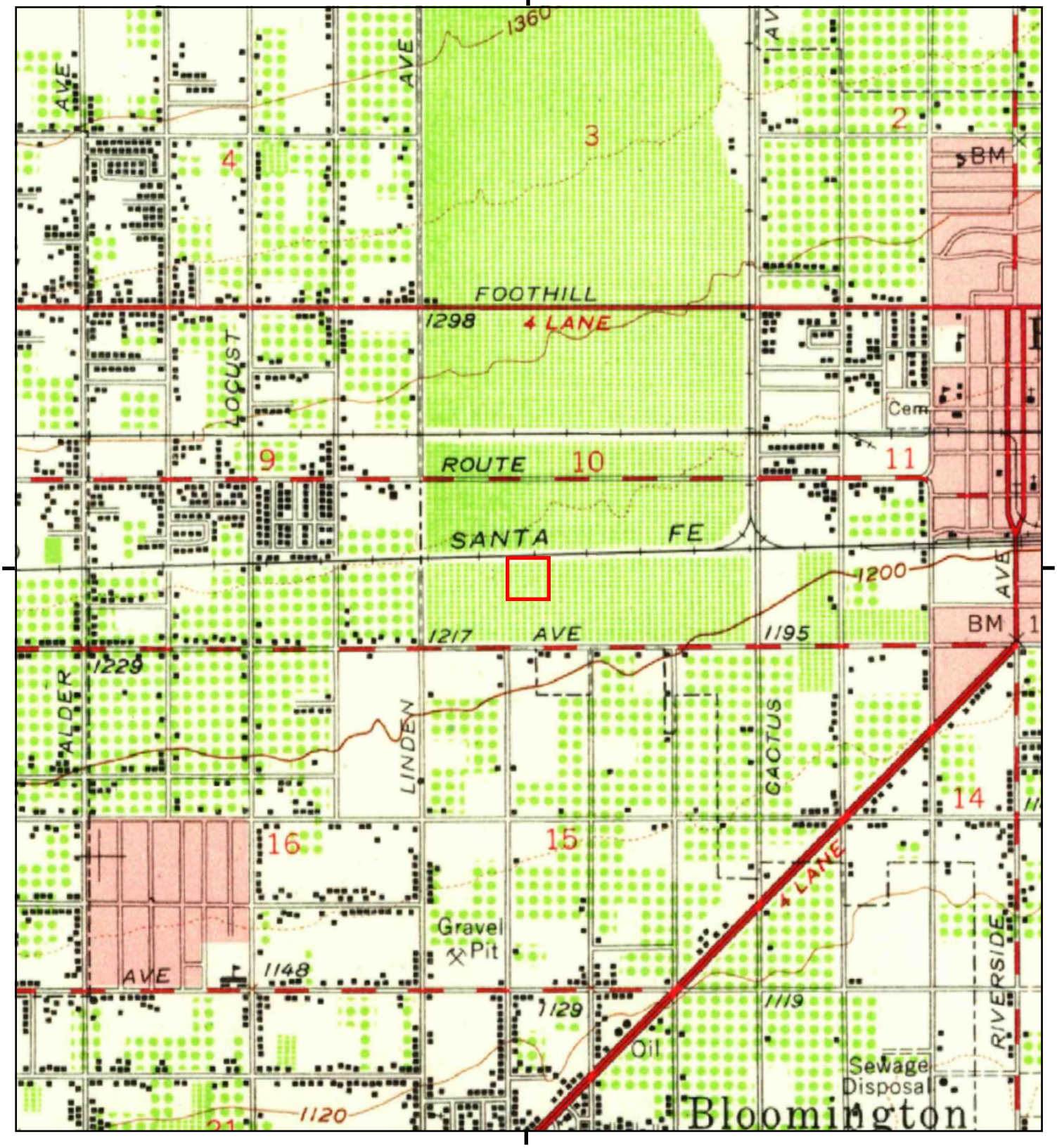
TP, Fontana, 1967, 7.5-minute
SE, San Bernardino South, 1967, 7.5-minute

SITE NAME: BCG Rialto
ADDRESS: 1230 W Durst Drive
Rialto, CA 92376
CLIENT: Roux Associates

N

Historical Topo Map

1954



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

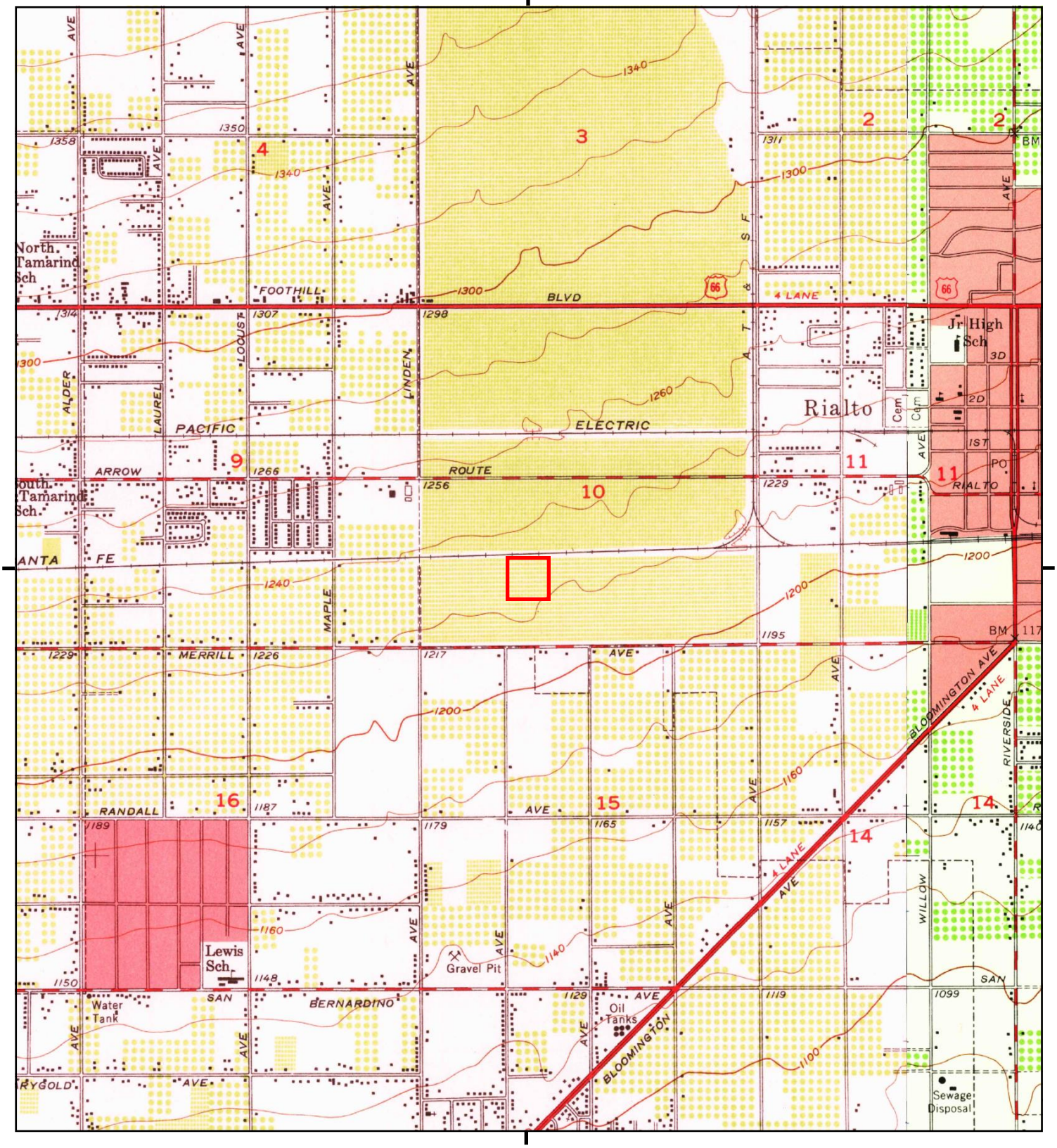
TP, San Bernardino, 1954, 15-minute

SITE NAME: BCG Rialto
ADDRESS: 1230 W Durst Drive
Rialto, CA 92376
CLIENT: Roux Associates

N

Historical Topo Map

1953, 1954



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

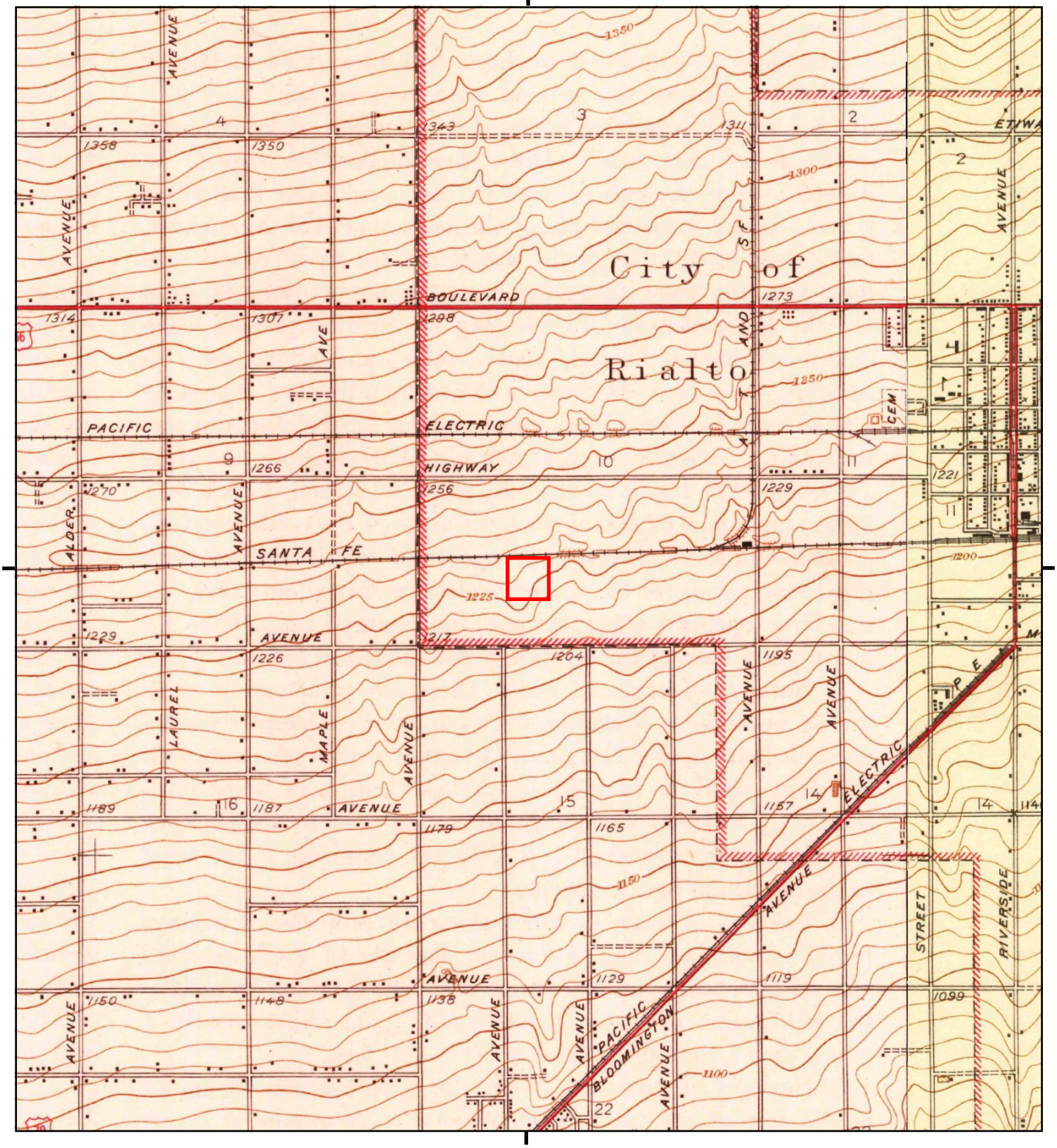
TP, Fontana, 1953, 7.5-minute
SE, San Bernardino South, 1954, 7.5-minute

SITE NAME: BCG Rialto
ADDRESS: 1230 W Durst Drive
Rialto, CA 92376
CLIENT: Roux Associates

N

Historical Topo Map

1943



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

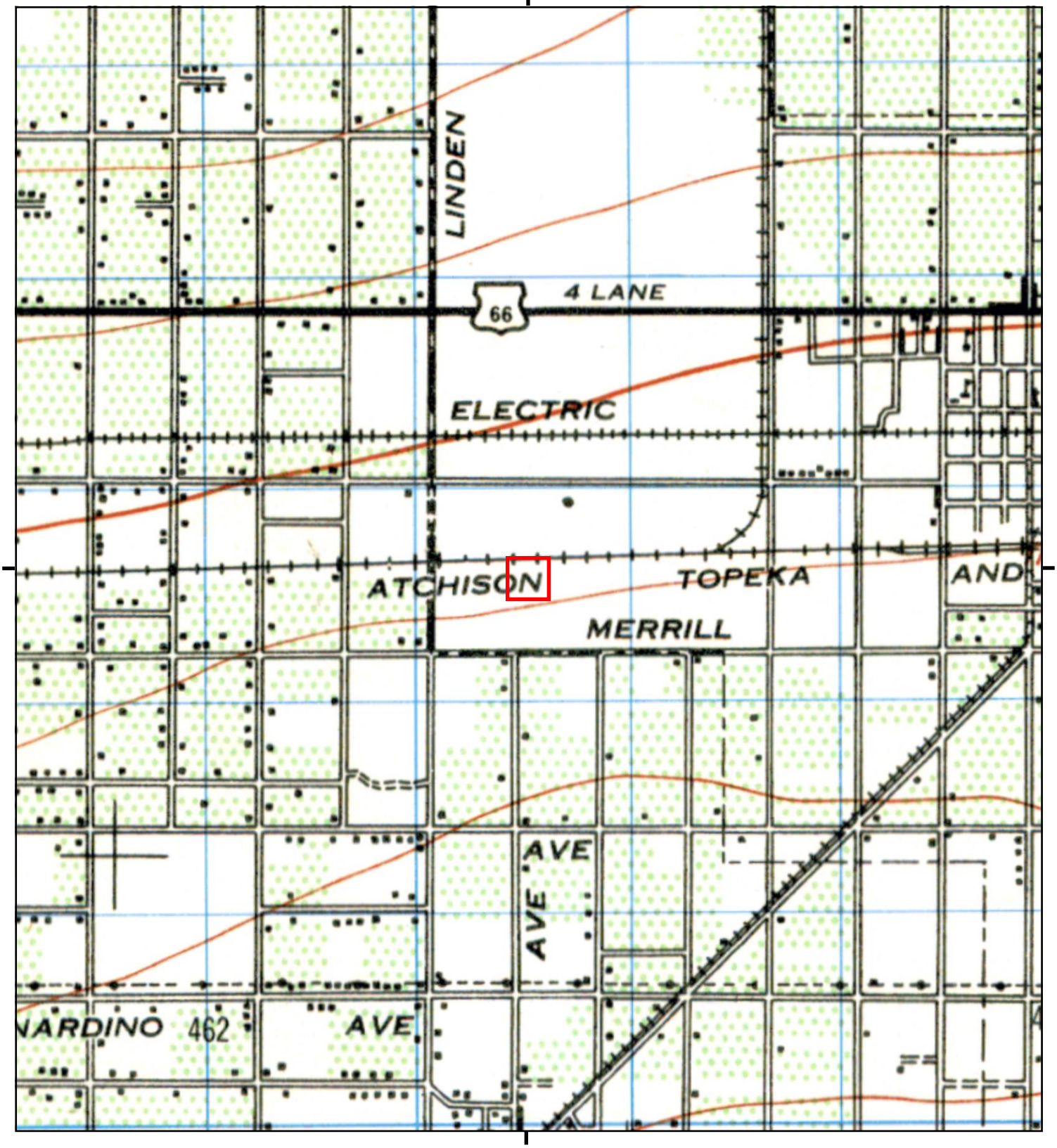
TP, Fontana, 1943, 7.5-minute
SE, Colton, 1943, 7.5-minute

SITE NAME: BCG Rialto
ADDRESS: 1230 W Durst Drive
Rialto, CA 92376
CLIENT: Roux Associates

N

Historical Topo Map

1942



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

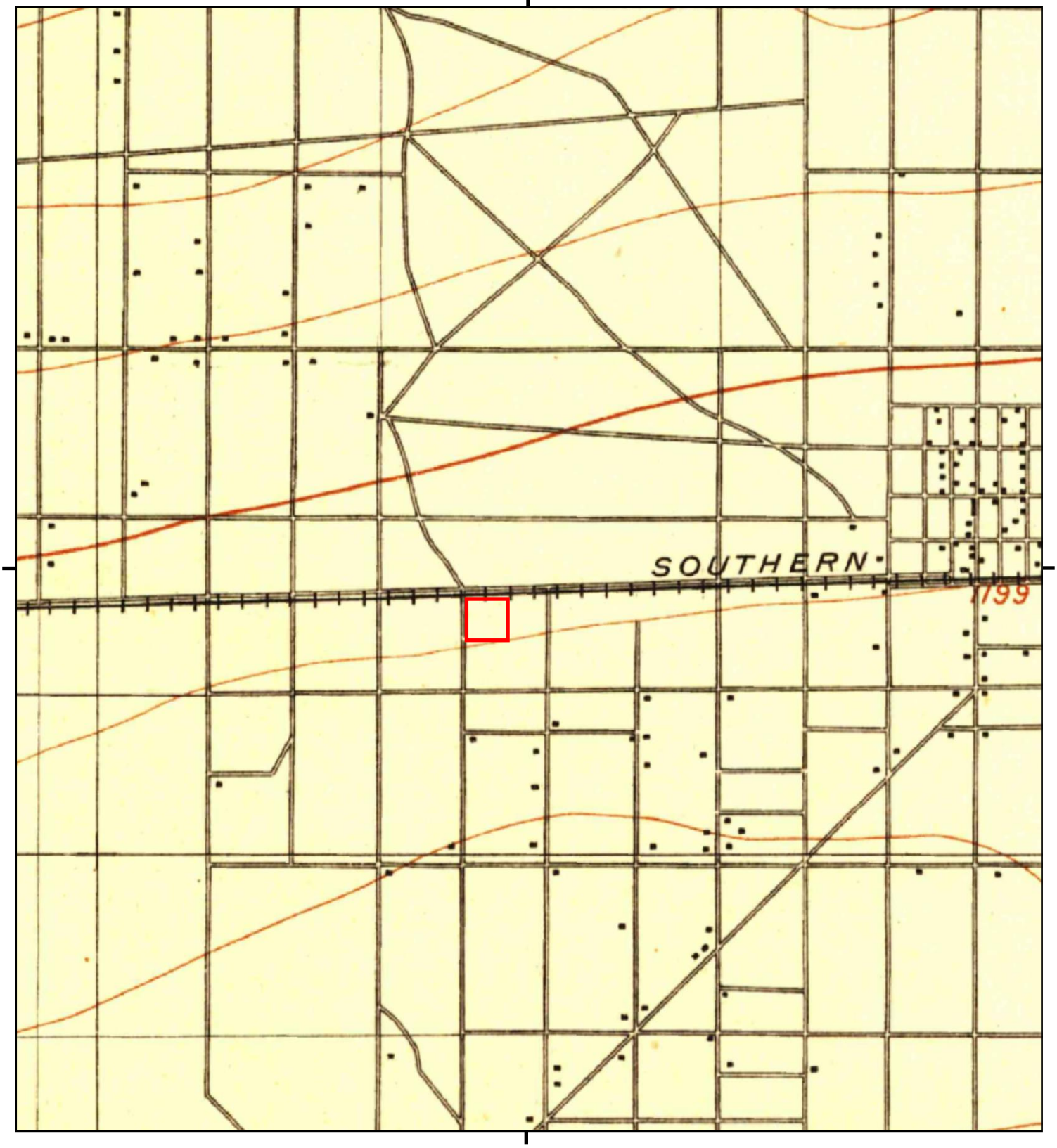
TP, SAN BERNARDINO, 1942, 15-minute

SITE NAME: BCG Rialto
ADDRESS: 1230 W Durst Drive
Rialto, CA 92376
CLIENT: Roux Associates

N

Historical Topo Map

1901



This report includes information from the following map sheet(s).

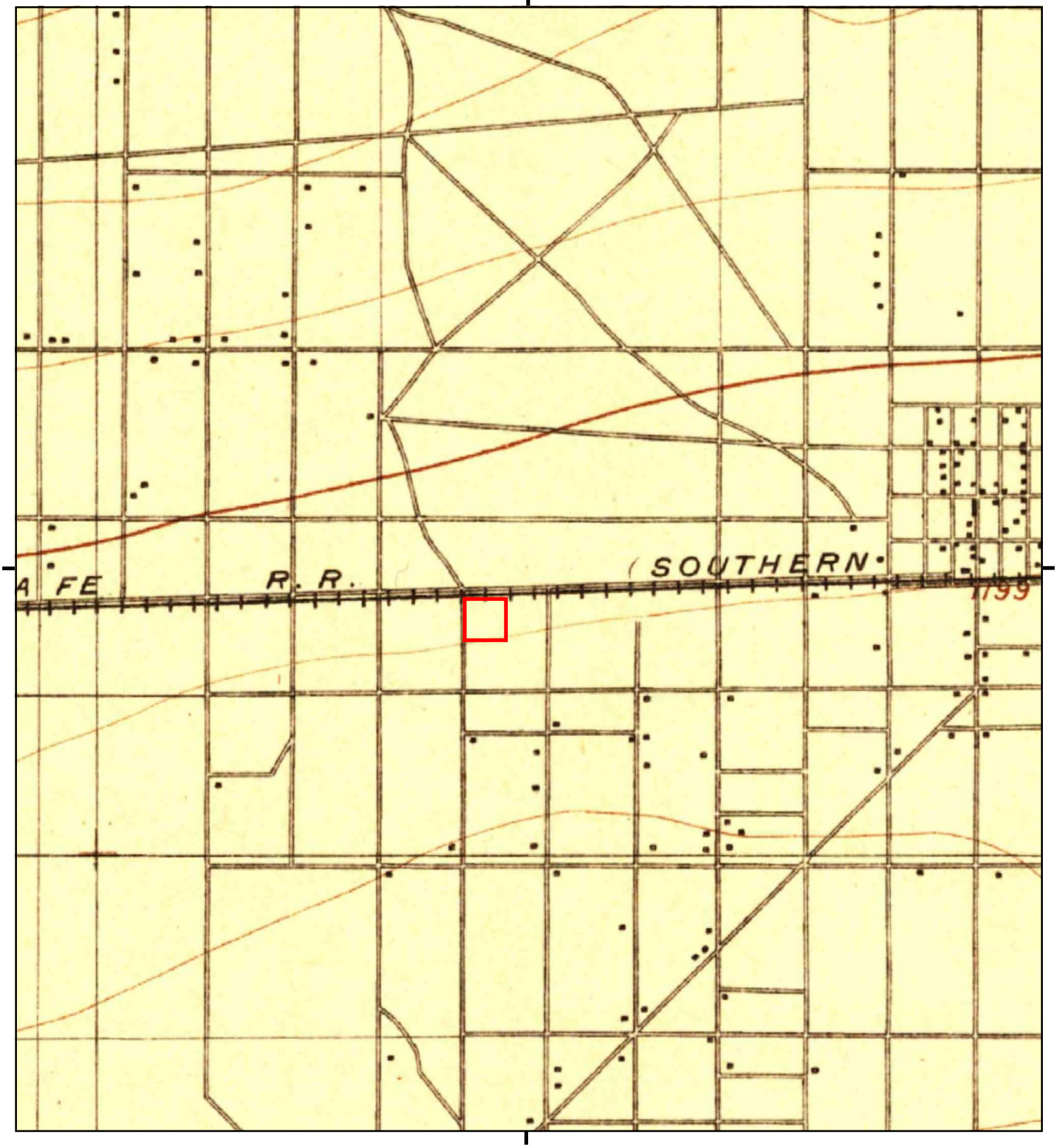
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, San Bernardino, 1901, 15-minute

SITE NAME: BCG Rialto
ADDRESS: 1230 W Durst Drive
Rialto, CA 92376
CLIENT: Roux Associates

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

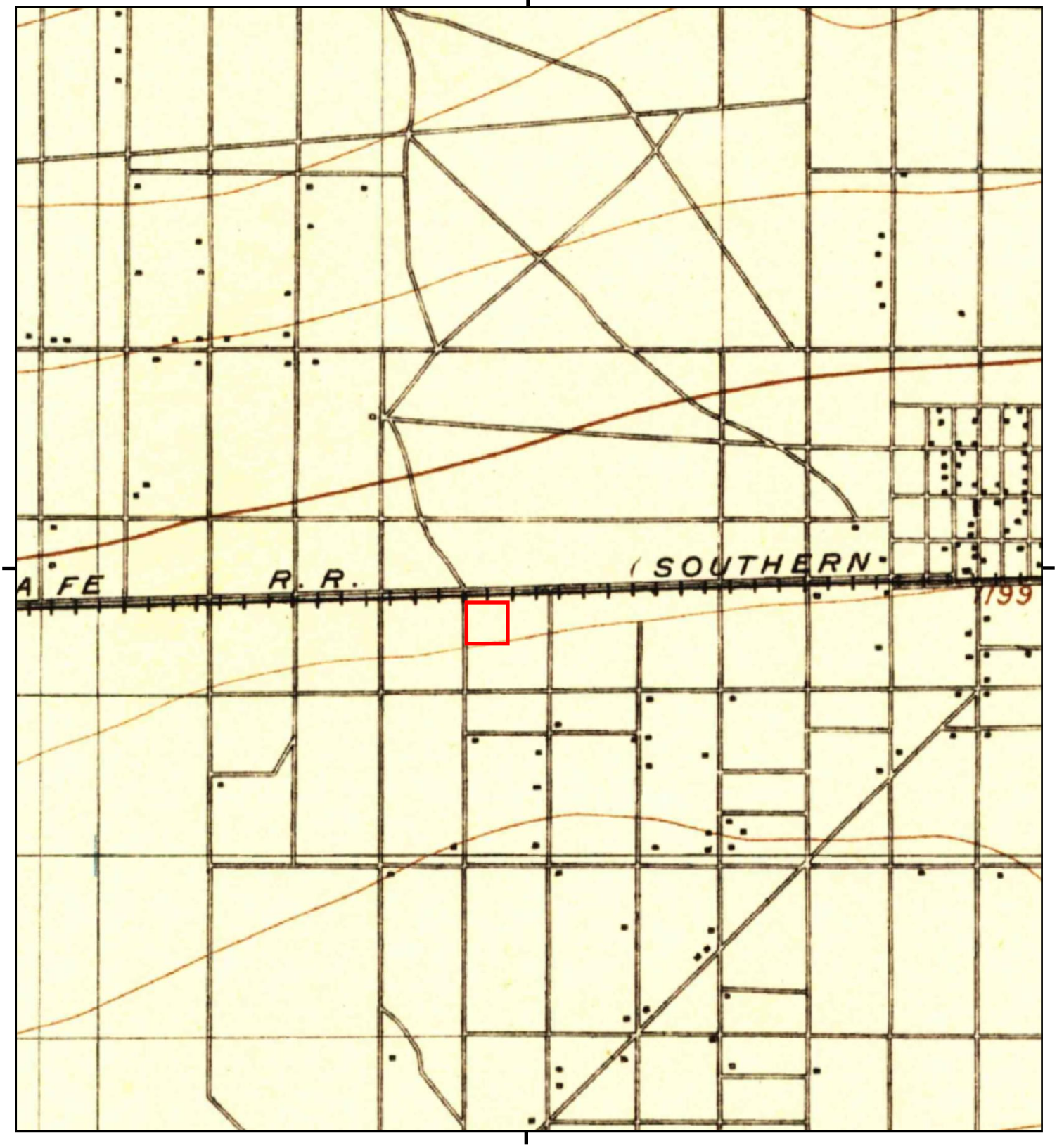
TP, San Bernardino, 1898, 15-minute

SITE NAME: BCG Rialto
ADDRESS: 1230 W Durst Drive
Rialto, CA 92376
CLIENT: Roux Associates

N

Historical Topo Map

1896



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, San Bernardino, 1896, 15-minute

SITE NAME: BCG Rialto
ADDRESS: 1230 W Durst Drive
Rialto, CA 92376
CLIENT: Roux Associates

N

APPENDIX C

Historical Aerial Photographs

BCG Rialto

1230 W Durst Drive

Rialto, CA 92376

Inquiry Number: 6393683.11

March 05, 2021

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

03/05/21

Site Name:

BCG Rialto
1230 W Durst Drive
Rialto, CA 92376
EDR Inquiry # 6393683.11

Client Name:

Roux Associates
402 Heron Drive
Logan Township, NJ 08085-0000
Contact: Connor Moore

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
2002	1"=500'	Acquisition Date: January 01, 2002	USGS/DOQQ
1994	1"=500'	Acquisition Date: June 01, 1994	USGS/DOQQ
1990	1"=500'	Flight Date: August 29, 1990	USDA
1985	1"=500'	Flight Date: September 13, 1985	USDA
1975	1"=500'	Flight Date: December 01, 1975	USGS
1968	1"=500'	Flight Date: August 21, 1968	USDA
1966	1"=500'	Flight Date: April 16, 1966	USGS
1959	1"=500'	Flight Date: October 15, 1959	USDA
1953	1"=500'	Flight Date: January 23, 1953	USDA
1948	1"=500'	Flight Date: July 10, 1948	USGS
1938	1"=500'	Flight Date: May 27, 1938	USDA

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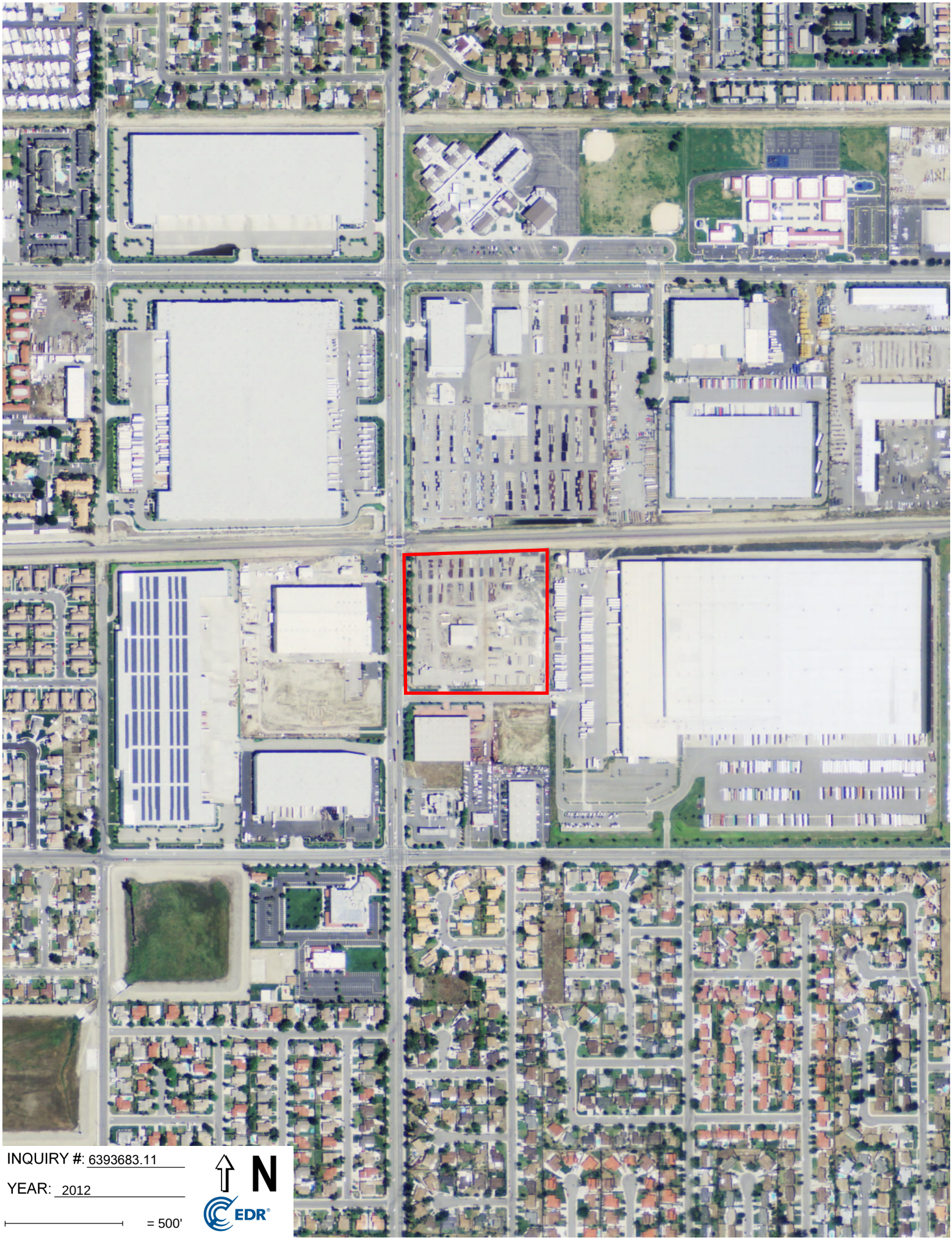
INQUIRY #: 6393683.11
YEAR: 2016
= 500'
N
EDR



INQUIRY #: 6393683.11

YEAR: 2012

= 500'

N

EDR



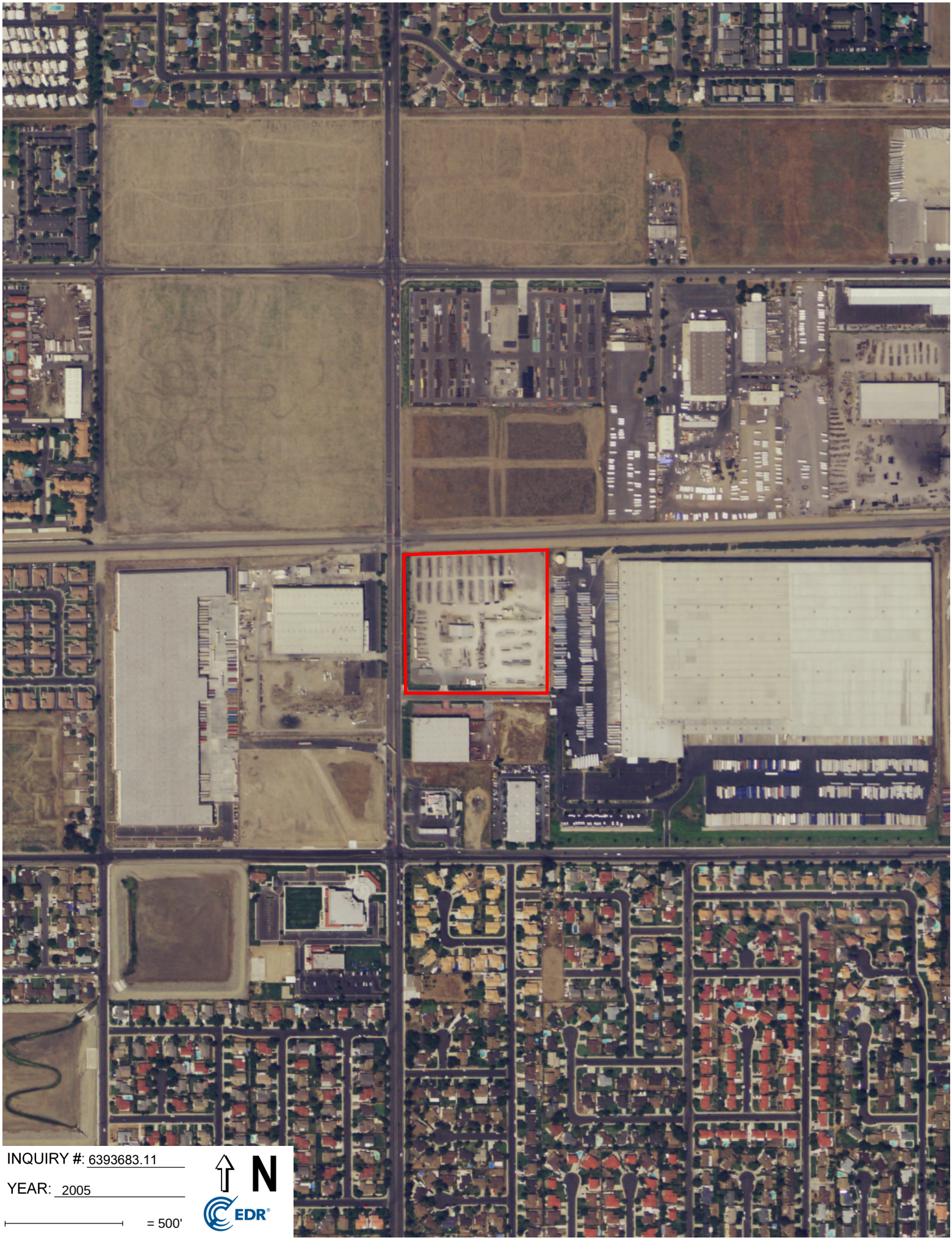
INQUIRY #: 6393683.11

YEAR: 2009

= 500'

N

EDR



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YEAR: 2005

= 500'

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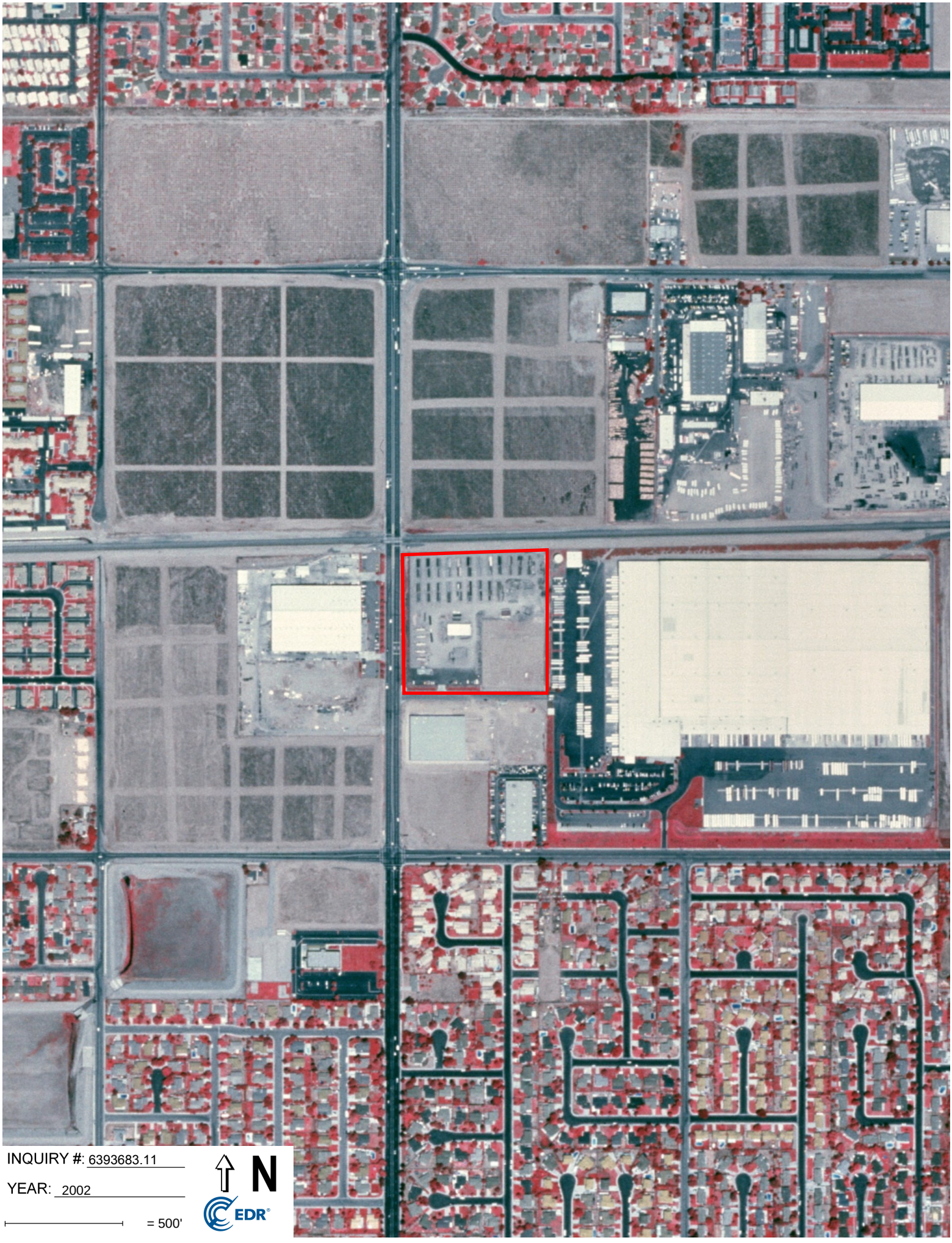
EDR



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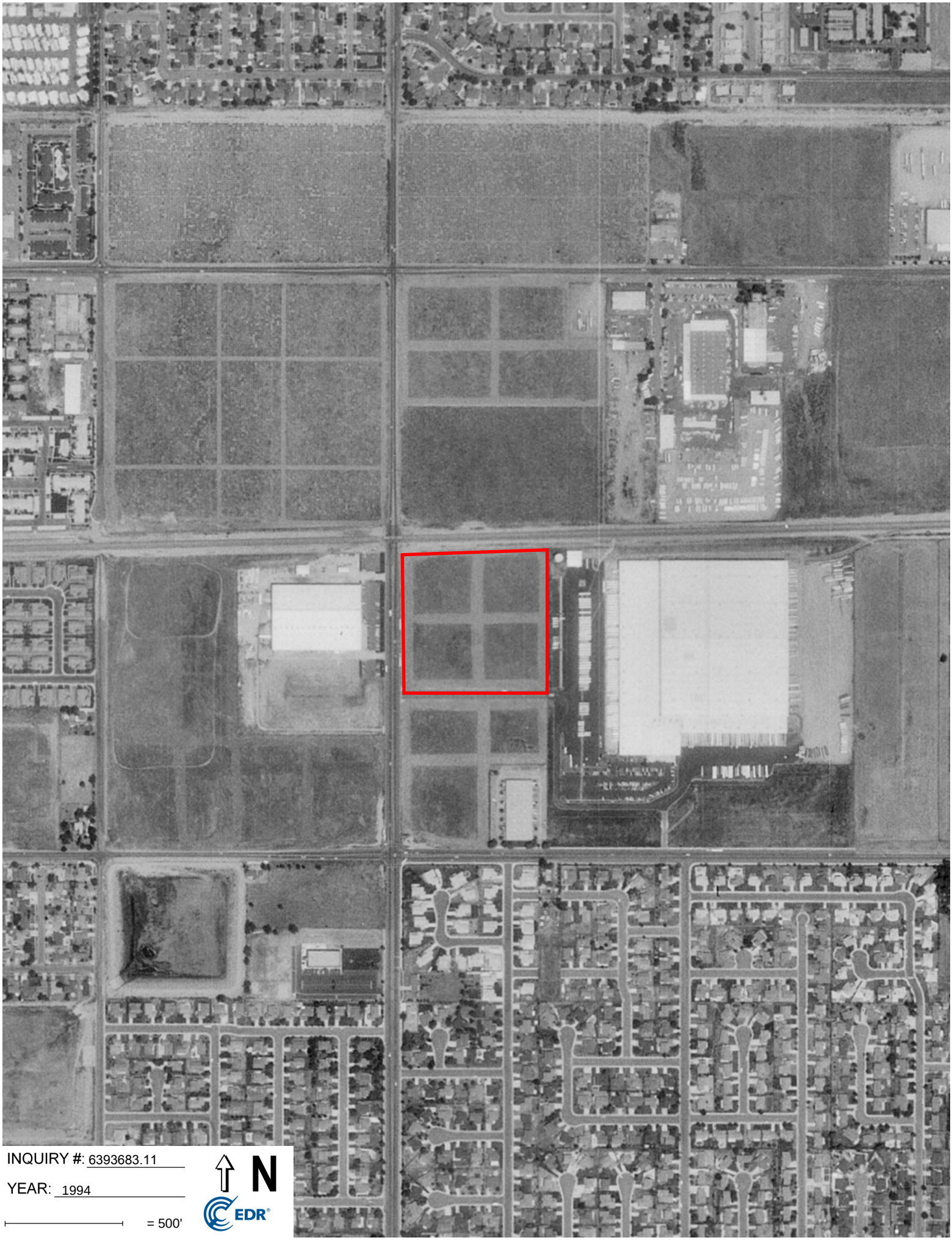
YEAR: 2002

= 500'

N

EDR



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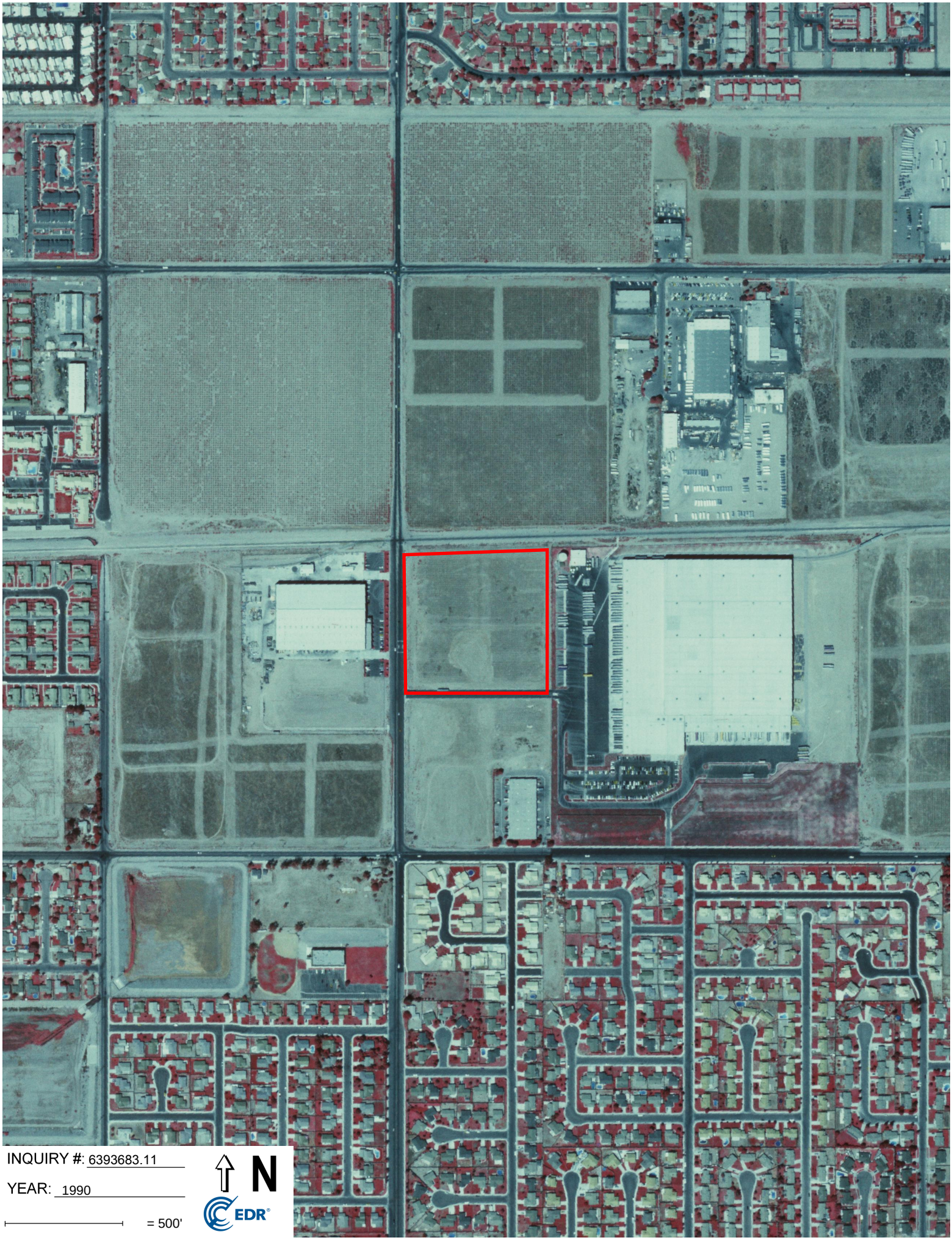
YEAR: 1994

= 500'

N

EDR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YEAR: 1990
= 500'
N
EDR



INQUIRY #: 6393683.11

YEAR: 1985

= 500'

N

EDR



INQUIRY #: 6393683.11

YEAR: 1975

= 500'

N

EDR



INQUIRY #: 6393683.11

YEAR: 1968

= 500'

N

EDR



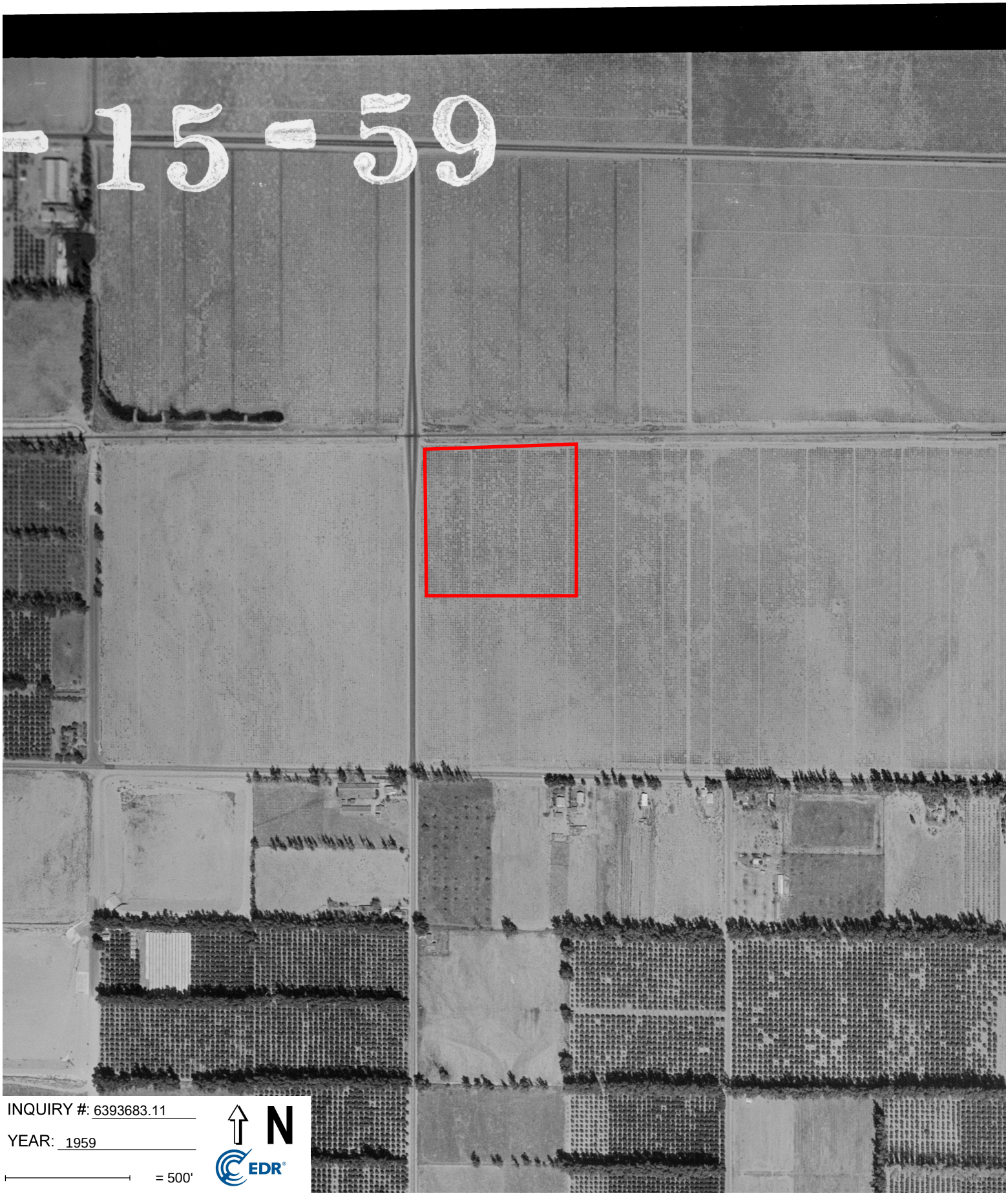
INQUIRY #: 6393683.11

YEAR: 1966

= 500'

N

EDR



INQUIRY #: 6393683.11

YEAR: 1959

= 500'

N

EDR



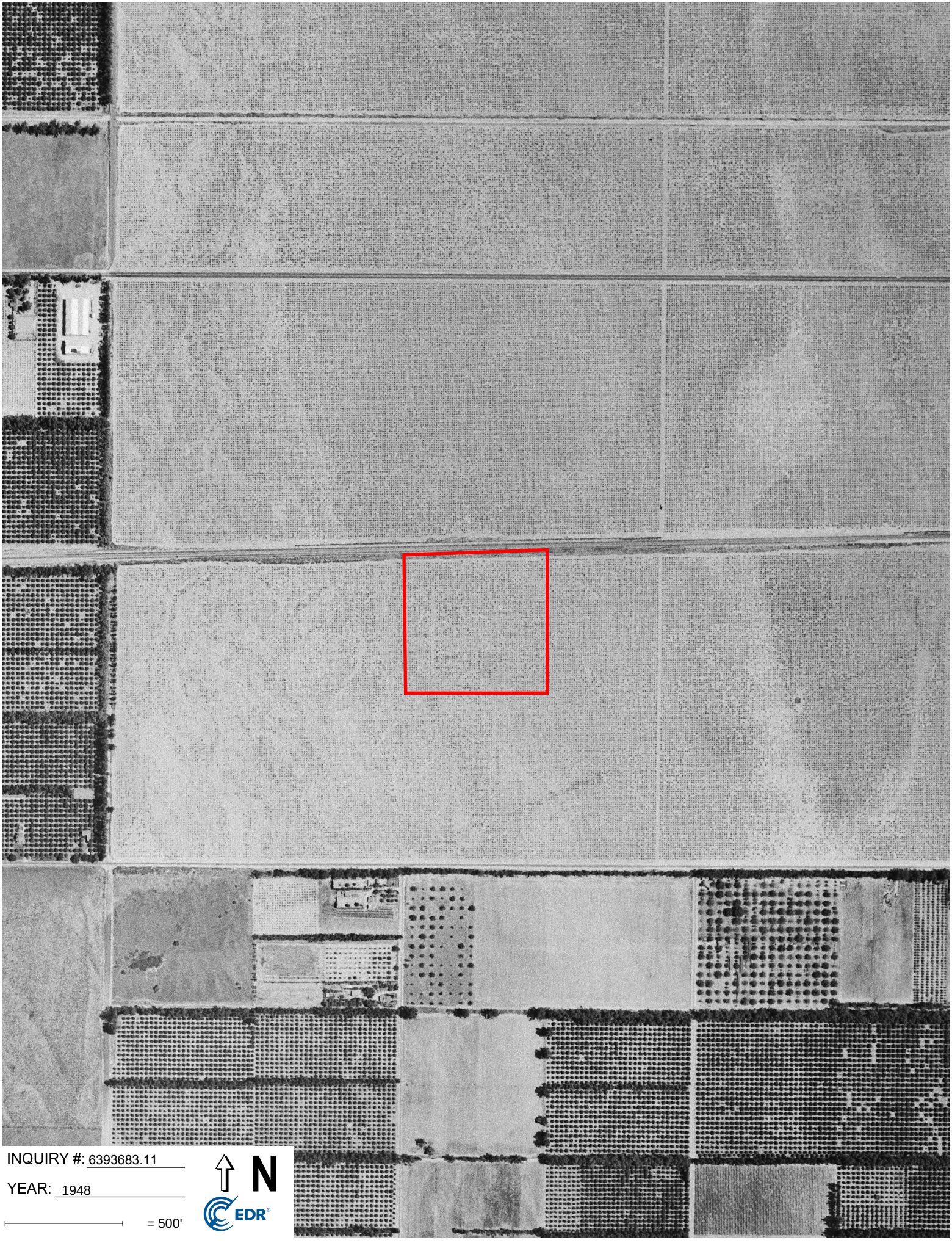
INQUIRY #: 6393683.11

YEAR: 1953

= 500'

N

EDR



INQUIRY #: 6393683.11

YEAR: 1948

= 500'

N

EDR



INQUIRY #: 6393683.11

YEAR: 1938

= 500'

N

EDR

APPENDIX D

Certified Sanborn Report

BCG Rialto

1230 W Durst Drive

Rialto, CA 92376

Inquiry Number: 6393683.3

March 05, 2021

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

03/05/21

Site Name:

BCG Rialto
1230 W Durst Drive
Rialto, CA 92376
EDR Inquiry # 6393683.3

Client Name:

Roux Associates
402 Heron Drive
Logan Township, NJ 08085-0000
Contact: Connor Moore

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Roux Associates were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 9B68-448A-8D52

PO # 3662

Project BCG Rialto

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 9B68-448A-8D52

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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APPENDIX E

EDR City Directory Image Report

BCG Rialto
1230 W Durst Drive
Rialto, CA 92376

Inquiry Number: 6393683.5
March 08, 2021

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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Findings

City Directory Images

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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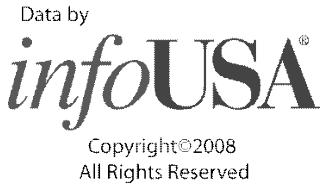

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2017	☑	☐	EDR Digital Archive
2014	☑	☐	EDR Digital Archive
2010	☑	☐	EDR Digital Archive
2005	☑	☐	EDR Digital Archive
2000	☐	☐	EDR Digital Archive
1995	☐	☐	EDR Digital Archive
1992	☐	☐	EDR Digital Archive
1985	☐	☐	Haines Criss-Cross Directory
1980	☐	☐	Haines Criss-Cross Directory
1976	☐	☐	Haines Criss-Cross Directory
1971	☐	☐	Haines Criss-Cross Directory
1965	☐	☐	Luskey City Directory
1942	☐	☐	San Bernardino Directory Company

FINDINGS

TARGET PROPERTY STREET

1230 W Durst Drive
Rialto, CA 92376

Year	*CD Image*	*Source*	
W DURST DR			
2017	pg A1	EDR Digital Archive	
2014	pg A2	EDR Digital Archive	
2010	pg A3	EDR Digital Archive	
2005	pg A4	EDR Digital Archive	
2000	-	EDR Digital Archive	Street not listed in Source
1995	-	EDR Digital Archive	Street not listed in Source
1992	-	EDR Digital Archive	Street not listed in Source
1985	-	Haines Criss-Cross Directory	Street not listed in Source
1980	-	Haines Criss-Cross Directory	Street not listed in Source
1976	-	Haines Criss-Cross Directory	Street not listed in Source
1971	-	Haines Criss-Cross Directory	Street not listed in Source
1965	-	Luskey City Directory	Street not listed in Source
1942	-	San Bernardino Directory Company	Street not listed in Source

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

W DURST DR 2017

1230 SOUTHLAND PIPE CORP
1251 MISSION METAL
SOLOMON COLORS

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

W DURST DR 2014

1230 SOUTHLAND PIPE CORP
1251 SOLOMON COLORS

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

W DURST DR 2010

1251 SOLOMON COLORS

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

W DURST DR 2005

1251 SOLOMON COLORS

APPENDIX F

EDR Radius Map Report with Geocheck®

BCG Rialto
1230 W Durst Drive
Rialto, CA 92376

Inquiry Number: 6393683.2s
March 05, 2021

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Physical Setting Source Map	A-8
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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

1230 W DURST DRIVE
RIALTO, CA 92376

COORDINATES

Latitude (North):	34.0955550 - 34° 5' 43.99''
Longitude (West):	117.3952940 - 117° 23' 43.05''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	463535.4
UTM Y (Meters):	3772626.8
Elevation:	1232 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5619058 FONTANA, CA
Version Date:	2012
Southeast Map:	5620416 SAN BERNARDINO SOUTH, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140603
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
1230 W DURST DRIVE
RIALTO, CA 92376

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	SOUTHLAND PIPE CORP	1230 W DURST DR	RCRA NonGen / NLR		TP
A2	SOUTHLAND PIPE FABRI	1230 W DURST DR	CIWQS		TP
A3	SOUTHLAND PIPE CORP	1230 W DURST DR	HWTS		TP
A4	SOUTHLAND PIPE CORP	1230 DURST DRIVE	NPDES, San Bern. Co. Permit, CIWQS, CERS		TP
A5	SOUTHLAND PIPE CORP.	1230 DURST DR	FINDS, ECHO		TP
B6	SOLOMON COLORS INC	1250 W DURST DR	CIWQS	Lower	1 ft.
B7	WEST COAST STEEL & P	1251 DURST DR	RCRA NonGen / NLR	Lower	86, 0.016, SSW
B8	SOLOMON COLORS	1251 W DURST DR	San Bern. Co. Permit	Lower	86, 0.016, SSW
B9	SOLOMON COLORS INC	1251 W DURST DR	CERS HAZ WASTE, NPDES, CIWQS, CERS, HWTS	Lower	86, 0.016, SSW
C10	FARR CO	300 S CEDAR AV	CERS HAZ WASTE, CERS TANKS, EMI, San Bern. Co....	Lower	417, 0.079, WSW
C11	MARTINEZ & TUREK INC	300 S CEDAR AVE	RCRA NonGen / NLR	Lower	417, 0.079, WSW
C12	FARR COMPANY RIALTO	300 S CEDAR AVE	RCRA-SQG, HAZNET, HWTS	Lower	417, 0.079, WSW
D13	CHEVRON STN #308294/	475 S CEDAR AVE	UST	Lower	558, 0.106, SSW
D14	CHEVRON 308294	475 S CEDAR AVE	RCRA-LQG, FINDS, ECHO	Lower	558, 0.106, SSW
D15	JACK IN THE BOX INC/	475 S CEDAR AVE	CERS HAZ WASTE, CERS TANKS, HAZNET, San Bern. Co....	Lower	558, 0.106, SSW
E16	DONALD C HUBBS, INC	150 S LARCH	SWEEPS UST, CA FID UST	Higher	628, 0.119, NE
E17	SSI EXPRESS INC	150 S LARCH AVE	HAZNET, NPDES, San Bern. Co. Permit, CIWQS, CERS,...	Higher	628, 0.119, NE
E18	JESSE HUBBS AND SONS	150 S LARCH	HIST UST	Higher	628, 0.119, NE
F19	DAVE'S AUTO BODY	1224 W MERRILL AVE	CERS HAZ WASTE, CERS	Lower	722, 0.137, South
F20	DAVE'S AUTO BODY	1224 W MERRILL AVE	San Bern. Co. Permit	Lower	722, 0.137, South
F21	DAVE'S AUTO BODY	1224 W MERRILL AVE	RCRA NonGen / NLR	Lower	722, 0.137, South
F22	LOPEZ AUTO ELECTRICA	1220 W MERRILL AVE	San Bern. Co. Permit	Lower	722, 0.137, South
F23	LOPEZ AUTO ELECTRICA	1220 W MERRILL AVE	CERS HAZ WASTE, HAZNET, CERS, HWTS	Lower	722, 0.137, South
F24	COSMOS AUTO SALES	1212 W MERRILL AVE	San Bern. Co. Permit	Lower	723, 0.137, SSE
F25	HERHO GROUP CORP DBA	1208 W MERRILL AVE	CERS HAZ WASTE, EMI, San Bern. Co. Permit, CERS,...	Lower	723, 0.137, SSE
F26	HERNO GROUP CORP DBA	1208 W MERRILL AVE	RCRA NonGen / NLR	Lower	723, 0.137, SSE
F27	BOB'S AUTO SERVICE	1202 W MERRILL AVE	RCRA NonGen / NLR	Lower	724, 0.137, SSE
F28	BOB'S AUTO SERVICE	1202 W MERRILL AVE	CERS HAZ WASTE, San Bern. Co. Permit, CERS	Lower	724, 0.137, SSE
29	STATE PIPE & SUPPLY	183 S CEDAR AVE	RCRA NonGen / NLR	Higher	768, 0.145, NNW
G30	VOGEL PROPERTIES, IN	1314 MERRILL AVE	San Bern. Co. Permit	Lower	803, 0.152, SSW
G31	GO GREEN INDUSTRIES	1314 W MERRILL AVE	San Bern. Co. Permit, CIWQS, CERS, HWTS	Lower	803, 0.152, SSW
E32	BISSELL HOME CARE IN	181 S LARCH ST	San Bern. Co. Permit, CERS	Higher	861, 0.163, NE
E33	FLEETWOOD TRAVEL TRA	145 SOUTH LARCH AVE	HIST UST, RCRA NonGen / NLR, EMI, WDS, CERS	Higher	864, 0.164, NE
34	SOUTHERN CALIFORNIA	1464 W MERRILL AVE	HAZNET, San Bern. Co. Permit, CERS, HWTS	Lower	1004, 0.190, WSW
H35	AMERICAN BUILDING SU	120 S CEDAR AVE	San Bern. Co. Permit, CERS, HWTS	Higher	1065, 0.202, NNW
H36	AMERICAN BUILDING SU	120 S CEDAR AVE	RCRA NonGen / NLR	Higher	1065, 0.202, NNW
I37	SM LOGISTICS RIALTO,	1110 W MERRILL AVENU	RCRA NonGen / NLR	Lower	1183, 0.224, SE
I38	TOYS R US	1110 W MERRILL AVE	RCRA NonGen / NLR	Lower	1183, 0.224, SE
I39	SM LOGISTICS RIALTO,	1110 W MERRILL AVE	UST, AST, CHMIRS, NPDES, San Bern. Co. Permit, WDS	Lower	1183, 0.224, SE

MAPPED SITES SUMMARY

Target Property Address:
1230 W DURST DRIVE
RIALTO, CA 92376

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
I40	TOYS R US DISTRIBUTI	1110 MERRILL AVE	SWEEPS UST, CA FID UST	Lower	1183, 0.224, SE
I41	TOYS R US	1110 W MERRILL AVE	CERS TANKS, CHMIRS, HAZNET, CIWQS, CERS, HWTS	Lower	1183, 0.224, SE
H42	MIDDLE SCHOOL NO. 6,	CEDAR AVENUE/WEST RI	ENVIROSTOR, SCH	Higher	1263, 0.239, NNW
H43	ELEMENTARY SCHOOL NO	CEDAR AVENUE/WEST RI	ENVIROSTOR, SCH	Higher	1263, 0.239, NNW
44	RIALTO USD - RIALTO	1262 W. RIALTO AVE	RCRA NonGen / NLR	Higher	1277, 0.242, North
J45	JONES SAW SERVICE, I	1111 W RIALTO AVE E	San Bern. Co. Permit	Higher	1288, 0.244, NNE
J46	VERIZON WIRELESS: AM	1132 W RIALTO AVE	San Bern. Co. Permit, CERS	Higher	1294, 0.245, NNE
47	ELEMENTARY SCHOOL NO	1550-1600, 1612, 163	ENVIROSTOR, SCH	Lower	1860, 0.352, WSW
48	ELEMENTARY SCHOOL NO	8330 LOCUST AVENUE	ENVIROSTOR, SCH	Higher	4669, 0.884, WNW
49	ELEMENTARY SCHOOL NO	FOOTHILL BOULEVARD/M	ENVIROSTOR, SCH	Higher	4719, 0.894, NW
K50	D & M DRUM CO	137 LILAC AVENUE	RESPONSE, ENVIROSTOR, HIST Cal-Sites, DEED, CERS	Lower	4784, 0.906, ENE
K51	SALES UNLIMITED INC.	491 W RIALTO AVE	ENVIROSTOR, SWEEPS UST, CA FID UST, HAZNET, San...	Lower	4837, 0.916, ENE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 9 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
SOUTHLAND PIPE CORP 1230 W DURST DR RIALTO, CA 92376	RCRA NonGen / NLR EPA ID:: CAL000343047	CAL000343047
SOUTHLAND PIPE FABRI 1230 W DURST DR RIALTO, CA 92376	CIWQS	N/A
SOUTHLAND PIPE CORP 1230 W DURST DR RIALTO, CA 92376	HWTS	N/A
SOUTHLAND PIPE CORP 1230 DURST DRIVE RIALTO, CA 92376	NPDES Facility Status: Active San Bern. Co. Permit Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0006306 CIWQS CERS	N/A
SOUTHLAND PIPE CORP. 1230 DURST DR RIALTO, CA 92376	FINDS Registry ID:: 110064935708 ECHO Registry ID: 110064935708	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List

EXECUTIVE SUMMARY

Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROLS ---------- Institutional Controls Sites List

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Information System

State and tribal leaking storage tank lists

LUST ---------- Geotracker's Leaking Underground Fuel Tank Report
INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land
CPS-SLIC ---------- Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST ---------- Underground Storage Tank Listing
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing

VCP ---- Voluntary Cleanup Program Properties

State and tribal Brownfields sites

BROWNFIELDS ---- Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT ---- Waste Management Unit Database
SWRCY ---- Recycler Database
HAULERS ---- Registered Waste Tire Haulers Listing
INDIAN ODI ---- Report on the Status of Open Dumps on Indian Lands
ODI ---- Open Dump Inventory
DEBRIS REGION 9 ---- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ---- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---- Delisted National Clandestine Laboratory Register
CDL ---- Clandestine Drug Labs
Toxic Pits ---- Toxic Pits Cleanup Act Sites
US CDL ---- National Clandestine Laboratory Register
PFAS ---- PFAS Contamination Site Location Listing

Local Land Records

LIENS ---- Environmental Liens Listing
LIENS 2 ---- CERCLA Lien Information
DEED ---- Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ---- Hazardous Materials Information Reporting System
CHMIRS ---- California Hazardous Material Incident Report System
LDS ---- Land Disposal Sites Listing
MCS ---- Military Cleanup Sites Listing
SPILLS 90 ---- SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS ---- Formerly Used Defense Sites
DOD ---- Department of Defense Sites
SCRD DRYCLEANERS ---- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---- Financial Assurance Information
EPA WATCH LIST ---- EPA WATCH LIST
2020 COR ACTION ---- 2020 Corrective Action Program List
TSCA ---- Toxic Substances Control Act
TRIS ---- Toxic Chemical Release Inventory System

EXECUTIVE SUMMARY

SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
DOCKET HWC	Hazardous Waste Compliance Docket Listing
UXO	Unexploded Ordnance Sites
FUELS PROGRAM	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
Cortese	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings	CUPA Resources List
DRYCLEANERS	Cleaner Facilities
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
HAZNET	Facility and Manifest Data
ICE	ICE
HIST CORTESE	Hazardous Waste & Substance Site List
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
MINES	Mines Site Location Listing
MWMP	Medical Waste Management Program Listing
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database
Notify 65	Proposition 65 Records
UIC	UIC Listing
UIC GEO	UIC GEO (GEOTRACKER)
WASTEWATER PITS	Oil Wastewater Pits Listing
WDS	Waste Discharge System
WIP	Well Investigation Program Case List
MILITARY PRIV SITES	MILITARY PRIV SITES (GEOTRACKER)
PROJECT	PROJECT (GEOTRACKER)
WDR	Waste Discharge Requirements Listing
NON-CASE INFO	NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS	OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS	PROD WATER PONDS (GEOTRACKER)

EXECUTIVE SUMMARY

SAMPLING POINT ---------- SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ ---------- Well Stimulation Project (GEOTRACKER)
MINES MRDS ---------- Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ---------- EDR Proprietary Manufactured Gas Plants
EDR Hist Auto ---------- EDR Exclusive Historical Auto Stations
EDR Hist Cleaner ---------- EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF ---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 12/14/2020 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CHEVRON 308294	***475 S CEDAR AVE***	***SSW 0 - 1/8 (0.106 mi.)***	***D14***	***54***
EPA ID:: CAR000201707				

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 12/14/2020 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
FARR COMPANY RIALTO	***300 S CEDAR AVE***	***WSW 0 - 1/8 (0.079 mi.)***	***C12***	***44***
EPA ID:: CAD982028383				

State- and tribal - equivalent NPL

RESPONSE: Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

A review of the RESPONSE list, as provided by EDR, has revealed that there is 1 RESPONSE site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
D & M DRUM CO	***137 LILAC AVENUE***	***ENE 1/2 - 1 (0.906 mi.)***	***K50***	***294***
Database: RESPONSE, Date of Government Version: 10/26/2020				
AWP Facility Id: 36500010				
Status: Certified O&M - Land Use Restrictions Only				
Facility Id: 36500010				

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 10/26/2020 has revealed that there are 7 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MIDDLE SCHOOL NO. 6,	***CEDAR AVENUE/WEST RI***	***NNW 1/8 - 1/4 (0.239 mi.)***	***H42***	***273***
Facility Id: 36010057				
Status: No Further Action				
ELEMENTARY SCHOOL NO	***CEDAR AVENUE/WEST RI***	***NNW 1/8 - 1/4 (0.239 mi.)***	***H43***	***277***

Facility Id: 36010056
Status: No Further Action

ELEMENTARY SCHOOL NO	***8330 LOCUST AVENUE***	***WNW 1/2 - 1 (0.884 mi.)***	***48***	***288***
Facility Id: 36010014 Status: No Further Action				
ELEMENTARY SCHOOL NO	***FOOTHILL BOULEVARD/M***	***NW 1/2 - 1 (0.894 mi.)***	***49***	***291***
Facility Id: 36010061 Status: No Further Action				

Lower Elevation	Address	Direction / Distance	Map ID	Page
ELEMENTARY SCHOOL NO	***1550-1600, 1612, 163***	***WSW 1/4 - 1/2 (0.352 mi.)***	***47***	***285***
Facility Id: 36010043 Status: Inactive - Withdrawn				
D & M DRUM CO	***137 LILAC AVENUE***	***ENE 1/2 - 1 (0.906 mi.)***	***K50***	***294***
Facility Id: 36500010 Status: Certified O&M - Land Use Restrictions Only				
SALES UNLIMITED INC.	***491 W RIALTO AVE***	***ENE 1/2 - 1 (0.916 mi.)***	***K51***	***311***
Facility Id: 60000814 Status: No Action Required				

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there are 2 UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CHEVRON STN #308294/	475 S CEDAR AVE	SSW 0 - 1/8 (0.106 mi.)	D13	54
Database: UST, Date of Government Version: 12/04/2020 Facility Id: FA0007798				
SM LOGISTICS RIALTO,	***1110 W MERRILL AVE***	***SE 1/8 - 1/4 (0.224 mi.)***	***I39***	***152***
Database: UST, Date of Government Version: 12/04/2020 Facility Id: FA0006764				

AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the AST list, as provided by EDR, has revealed that there is 1 AST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SM LOGISTICS RIALTO,	***1110 W MERRILL AVE***	***SE 1/8 - 1/4 (0.224 mi.)***	***I39***	***152***
Database: AST, Date of Government Version: 07/06/2016				

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

HIST Cal-Sites: Formerly known as ASPIS, this database contains both known and potential hazardous substance sites. The source is the California Department of Toxic Substance Control. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

A review of the HIST Cal-Sites list, as provided by EDR, and dated 08/08/2005 has revealed that there is 1 HIST Cal-Sites site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
D & M DRUM CO	***137 LILAC AVENUE***	***ENE 1/2 - 1 (0.906 mi.)***	***K50***	***294***

SCH: This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category. depending on the level of threat to public health and safety or the. environment they pose.

A review of the SCH list, as provided by EDR, and dated 10/26/2020 has revealed that there are 2 SCH sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MIDDLE SCHOOL NO. 6, Facility Id: 36010057 Status: No Further Action	***CEDAR AVENUE/WEST RI***	***NNW 1/8 - 1/4 (0.239 mi.)***	***H42***	***273***
ELEMENTARY SCHOOL NO Facility Id: 36010056 Status: No Further Action	***CEDAR AVENUE/WEST RI***	***NNW 1/8 - 1/4 (0.239 mi.)***	***H43***	***277***

CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CERS HAZ WASTE list, as provided by EDR, and dated 10/19/2020 has revealed that there are 7 CERS HAZ WASTE sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SOLOMON COLORS INC	***1251 W DURST DR***	***SSW 0 - 1/8 (0.016 mi.)***	***B9***	***30***
FARR CO	***300 S CEDAR AV***	***WSW 0 - 1/8 (0.079 mi.)***	***C10***	***33***
JACK IN THE BOX INC/	***475 S CEDAR AVE***	***SSW 0 - 1/8 (0.106 mi.)***	***D15***	***57***
DAVE'S AUTO BODY	***1224 W MERRILL AVE***	***S 1/8 - 1/4 (0.137 mi.)***	***F19***	***84***
LOPEZ AUTO ELECTRICA	***1220 W MERRILL AVE***	***S 1/8 - 1/4 (0.137 mi.)***	***F23***	***92***
HERHO GROUP CORP DBA	***1208 W MERRILL AVE***	***SSE 1/8 - 1/4 (0.137 mi.)***	***F25***	***100***
BOB'S AUTO SERVICE	***1202 W MERRILL AVE***	***SSE 1/8 - 1/4 (0.137 mi.)***	***F28***	***110***

Local Lists of Registered Storage Tanks

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 2 SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DONALD C HUBBS, INC Comp Number: 2936	***150 S LARCH***	***NE 0 - 1/8 (0.119 mi.)***	***E16***	***70***

Lower Elevation	Address	Direction / Distance	Map ID	Page
TOYS R US DISTRIBUTI Status: A Tank Status: A Comp Number: 10362	***1110 MERRILL AVE***	***SE 1/8 - 1/4 (0.224 mi.)***	***I40***	***165***

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 2 HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
JESSE HUBBS AND SONS Facility Id: 00000002936	150 S LARCH	NE 0 - 1/8 (0.119 mi.)	E18	82
FLEETWOOD TRAVEL TRA Facility Id: 00000018137	***145 SOUTH LARCH AVE***	***NE 1/8 - 1/4 (0.164 mi.)***	***E33***	***126***

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 2 CA FID UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DONALD C HUBBS, INC Facility Id: 36002085 Status: I	***150 S LARCH***	***NE 0 - 1/8 (0.119 mi.)***	***E16***	***70***

Lower Elevation	Address	Direction / Distance	Map ID	Page
TOYS R US DISTRIBUTI Facility Id: 36006357 Status: A	***1110 MERRILL AVE***	***SE 1/8 - 1/4 (0.224 mi.)***	***I40***	***165***

EXECUTIVE SUMMARY

CERS TANKS: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

A review of the CERS TANKS list, as provided by EDR, and dated 10/19/2020 has revealed that there are 3 CERS TANKS sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
FARR CO	***300 S CEDAR AV***	***WSW 0 - 1/8 (0.079 mi.)***	***C10***	***33***
JACK IN THE BOX INC/	***475 S CEDAR AVE***	***SSW 0 - 1/8 (0.106 mi.)***	***D15***	***57***
TOYS R US	***1110 W MERRILL AVE***	***SE 1/8 - 1/4 (0.224 mi.)***	***I41***	***166***

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/14/2020 has revealed that there are 11 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
STATE PIPE & SUPPLY EPA ID:: CAL000339246	183 S CEDAR AVE	NNW 1/8 - 1/4 (0.145 mi.)	29	114
FLEETWOOD TRAVEL TRA EPA ID:: CAD981384092	***145 SOUTH LARCH AVE***	***NE 1/8 - 1/4 (0.164 mi.)***	***E33***	***126***
AMERICAN BUILDING SU EPA ID:: CAL000453407	120 S CEDAR AVE	NNW 1/8 - 1/4 (0.202 mi.)	H36	145
RIALTO USD - RIALTO EPA ID:: CAL000432308	1262 W. RIALTO AVE	N 1/8 - 1/4 (0.242 mi.)	44	280

Lower Elevation	Address	Direction / Distance	Map ID	Page
WEST COAST STEEL & P EPA ID:: CAL000446106	1251 DURST DR	SSW 0 - 1/8 (0.016 mi.)	B7	27
MARTINEZ & TUREK INC EPA ID:: CAL000171754	300 S CEDAR AVE	WSW 0 - 1/8 (0.079 mi.)	C11	42
DAVE'S AUTO BODY EPA ID:: CAL000213469	1224 W MERRILL AVE	S 1/8 - 1/4 (0.137 mi.)	F21	89
HERNO GROUP CORP DBA EPA ID:: CAL000293154	1208 W MERRILL AVE	SSE 1/8 - 1/4 (0.137 mi.)	F26	105
BOB'S AUTO SERVICE EPA ID:: CAL000275340	1202 W MERRILL AVE	SSE 1/8 - 1/4 (0.137 mi.)	F27	108
SM LOGISTICS RIALTO, EPA ID:: CAC002998221	1110 W MERRILL AVENU	SE 1/8 - 1/4 (0.224 mi.)	I37	147
TOYS R US EPA ID:: CAL000062411	1110 W MERRILL AVE	SE 1/8 - 1/4 (0.224 mi.)	I38	150

EXECUTIVE SUMMARY

San Bern. Co. Permit: San Bernardino County Fire Department Hazardous Materials Division.

A review of the San Bern. Co. Permit list, as provided by EDR, and dated 11/16/2020 has revealed that there are 17 San Bern. Co. Permit sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SSI EXPRESS INC Facility Status: INACTIVE Facility Id: FA0005407	***150 S LARCH AVE***	***NE 0 - 1/8 (0.119 mi.)***	***E17***	***73***
BISSELL HOME CARE IN Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0014010	***181 S LARCH ST***	***NE 1/8 - 1/4 (0.163 mi.)***	***E32***	***124***
AMERICAN BUILDING SU Facility Status: ACTIVE Facility Id: FA0014685	***120 S CEDAR AVE***	***NNW 1/8 - 1/4 (0.202 mi.)***	***H35***	***141***
JONES SAW SERVICE, I Facility Status: INACTIVE Facility Id: FA0004172	1111 W RIALTO AVE E	NNE 1/8 - 1/4 (0.244 mi.)	J45	283
VERIZON WIRELESS: AM Facility Status: ACTIVE Facility Id: FA0008066	***1132 W RIALTO AVE***	***NNE 1/8 - 1/4 (0.245 mi.)***	***J46***	***283***

Lower Elevation	Address	Direction / Distance	Map ID	Page
SOLOMON COLORS Facility Status: INACTIVE Facility Id: FA0008537	1251 W DURST DR	SSW 0 - 1/8 (0.016 mi.)	B8	30
FARR CO Facility Status: ACTIVE Facility Id: FA0004601	***300 S CEDAR AV***	***WSW 0 - 1/8 (0.079 mi.)***	***C10***	***33***
JACK IN THE BOX INC/ Facility Status: ACTIVE Facility Id: FA0007798	***475 S CEDAR AVE***	***SSW 0 - 1/8 (0.106 mi.)***	***D15***	***57***
DAVE'S AUTO BODY Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0007629 Facility Id: FA0002892	1224 W MERRILL AVE	S 1/8 - 1/4 (0.137 mi.)	F20	88
LOPEZ AUTO ELECTRICA Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0004478	1220 W MERRILL AVE	S 1/8 - 1/4 (0.137 mi.)	F22	92
COSMOS AUTO SALES Facility Status: INACTIVE Facility Id: FA0002510	1212 W MERRILL AVE	SSE 1/8 - 1/4 (0.137 mi.)	F24	99
HERHO GROUP CORP DBA Facility Status: ACTIVE Facility Status: FEE EXEMPT Facility Id: FA0014059	***1208 W MERRILL AVE***	***SSE 1/8 - 1/4 (0.137 mi.)***	***F25***	***100***
BOB'S AUTO SERVICE	***1202 W MERRILL AVE***	***SSE 1/8 - 1/4 (0.137 mi.)***	***F28***	***110***

Facility Status: ACTIVE Facility Status: FEE EXEMPT Facility Id: FA0001528				
VOGEL PROPERTIES, IN Facility Status: INACTIVE Facility Id: FA0015767	1314 MERRILL AVE	SSW 1/8 - 1/4 (0.152 mi.)	G30	117
GO GREEN INDUSTRIES Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0016927 Facility Id: FA0014275	***1314 W MERRILL AVE***	***SSW 1/8 - 1/4 (0.152 mi.)***	***G31***	***117***
SOUTHERN CALIFORNIA Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0014969	***1464 W MERRILL AVE***	***WSW 1/8 - 1/4 (0.190 mi.)***	***34***	***136***
SM LOGISTICS RIALTO, Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0006764	***1110 W MERRILL AVE***	***SE 1/8 - 1/4 (0.224 mi.)***	***I39***	***152***

CIWQS: The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

A review of the CIWQS list, as provided by EDR, and dated 11/30/2020 has revealed that there is 1 CIWQS site within approximately 0.001 miles of the target property.

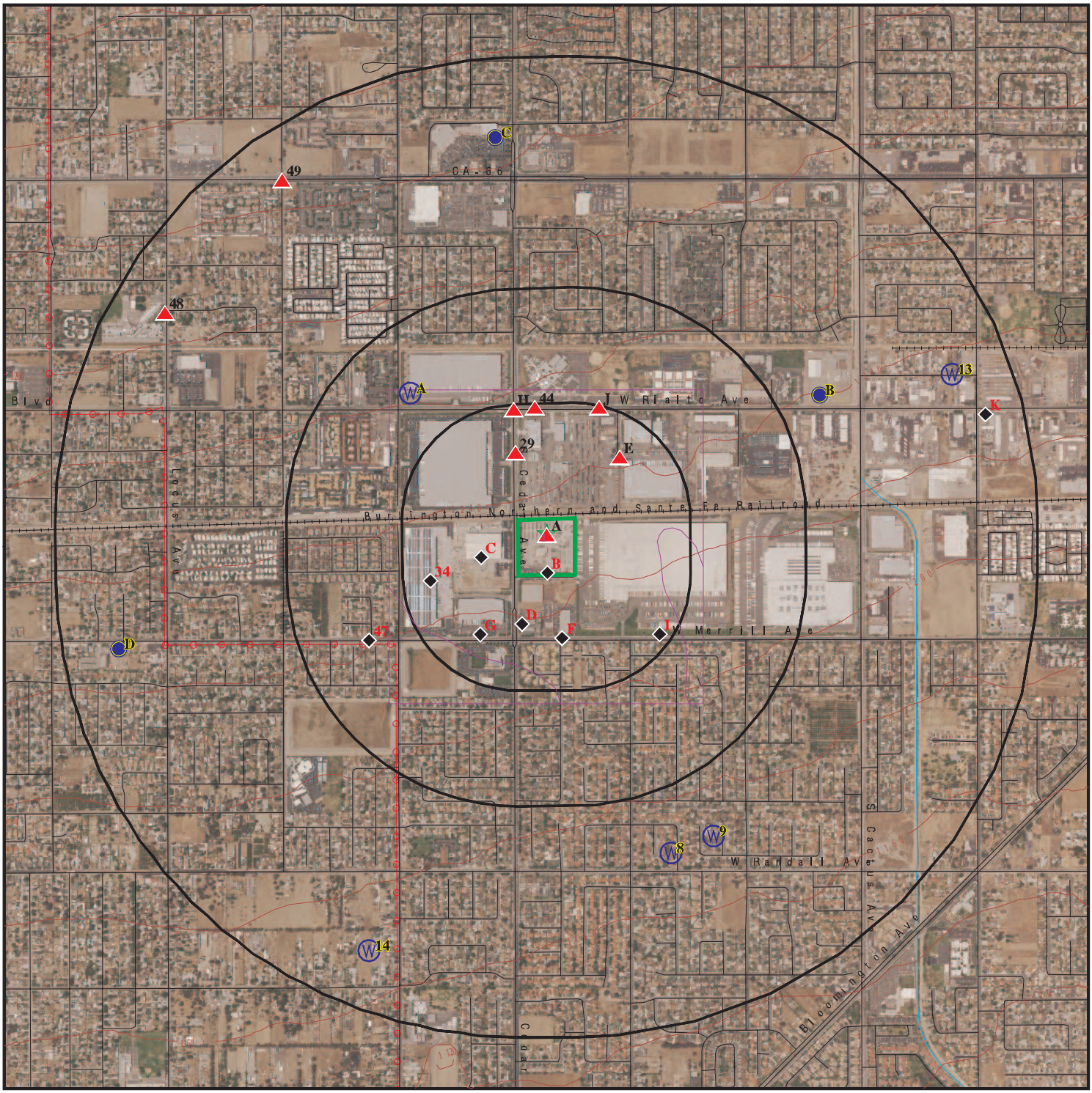
Lower Elevation	Address	Direction / Distance	Map ID	Page
SOLOMON COLORS INC	1250 W DURST DR	0 - 1/8 (0.000 mi.)	B6	27

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 6 records.

Site Name	Database(s)
RIALTO PHASE IB	CIWQS
RIALTO 3	CIWQS
RIALTO 9TH GRADE CAMPUS	CIWQS
RIALTO I	CIWQS
RIALTO UNIFIED SCHOOL DISTRICT	LUST
SCE - FLANCO	ENVIROSTOR, VCP

OVERVIEW MAP - 6393683.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	BCG Rialto	CLIENT:	Roux Associates
ADDRESS:	1230 W Durst Drive Rialto CA 92376	CONTACT:	Connor Moore
		INQUIRY #:	6393683.2s
LAT/LONG:	34.095555 / 117.395294	DATE:	March 05, 2021 3:52 pm

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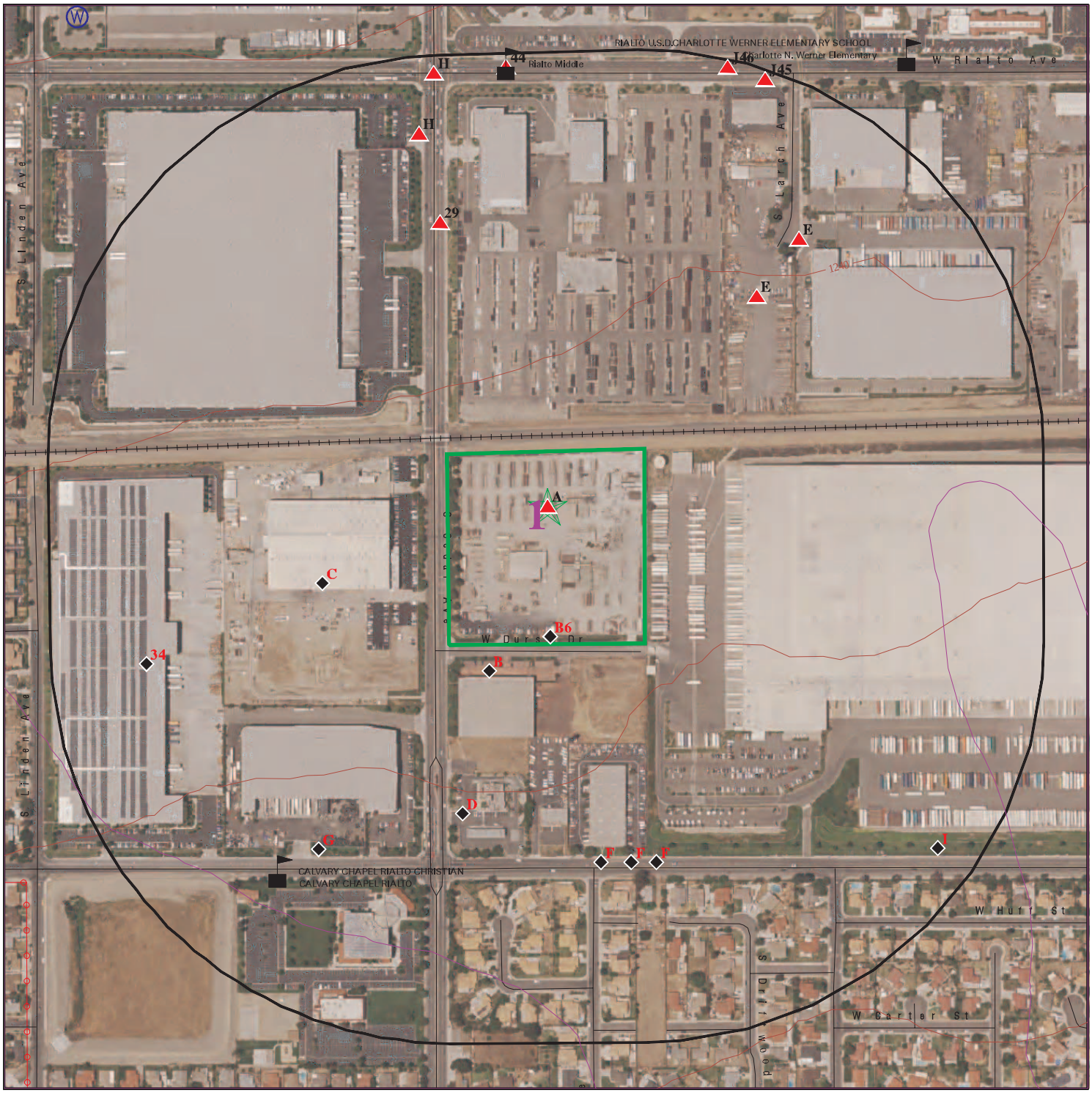
DETAIL MAP - 6393683.2S



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: BCG Rialto	CLIENT: Roux Associates
ADDRESS: 1230 W Durst Drive Rialto CA 92376	CONTACT: Connor Moore
LAT/LONG: 34.095555 / 117.395294	INQUIRY #: 6393683.2s DATE: March 05, 2021 3:54 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		1	0	NR	NR	NR	1
RCRA-SQG	0.250		1	0	NR	NR	NR	1
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	1	NR	1
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	2	1	4	NR	7
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		1	1	NR	NR	NR	2
AST	0.250		0	1	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	1	NR	1
SCH	0.250		0	2	NR	NR	NR	2
CDL	0.001		0	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CERS HAZ WASTE	0.250		3	4	NR	NR	NR	7
US CDL	0.001		0	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		1	1	NR	NR	NR	2
HIST UST	0.250		1	1	NR	NR	NR	2
CA FID UST	0.250		1	1	NR	NR	NR	2
CERS TANKS	0.250		2	1	NR	NR	NR	3
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250	1	2	9	NR	NR	NR	12
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001	1	0	NR	NR	NR	NR	1
ECHO	0.001	1	0	NR	NR	NR	NR	1
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001	1	0	NR	NR	NR	NR	1
San Bern. Co. Permit	0.250	1	4	13	NR	NR	NR	18
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001	2	1	NR	NR	NR	NR	3
CERS	0.001	1	0	NR	NR	NR	NR	1
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
MINES MRDS	0.001		0	NR	NR	NR	NR	0
HWTS	0.001	1	0	NR	NR	NR	NR	1
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		9	18	36	1	6	0	70

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **SOUTHLAND PIPE CORP** **RCRA NonGen / NLR** **1024823156**
Target **1230 W DURST DR** **CAL000343047**
Property **RIALTO, CA 92376**

Site 1 of 5 in cluster A

Actual: **1232 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:		2009-05-15 00:00:00.0
Handler Name:	SOUTHLAND PIPE CORP	
Handler Address:		1230 W DURST DR
Handler City,State,Zip:		RIALTO, CA 92376-9102
EPA ID:		CAL000343047
Contact Name:		CHRIS CARTWRIGHT
Contact Address:		1230 W DURST DR
Contact City,State,Zip:		RIALTO, CA 92376
Contact Telephone:		909-873-3820
Contact Fax:		909-873-3825
Contact Email:		CHRIS@SOUTHLANDPIPE.COM
Contact Title:		Not reported
EPA Region:		09
Land Type:		Not reported
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities
State District Owner:		Not reported
State District:		Not reported
Mailing Address:		PO BOX 9437
Mailing City,State,Zip:		ALTA LOMA, CA 91701-8437
Owner Name:		SOUTHLAND PIPE CORP
Owner Type:		Other
Operator Name:		CHRIS CARTWRIGHT
Operator Type:		Other
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		Yes
Universal Waste Destination Facility:		Yes
Federal Universal Waste:		No
Active Site Fed-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site Converter Treatment storage and Disposal Facility:		Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site State-Reg Handler:		---
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		N
Sub-Part K Indicator:		Not reported
Commercial TSD Indicator:		No
Treatment Storage and Disposal Type:		Not reported
2018 GPRA Permit Baseline:		Not on the Baseline
2018 GPRA Renewals Baseline:		Not on the Baseline
Permit Renewals Workload Universe:		Not reported

SOUTHLAND PIPE CORP (Continued) **1024823156**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-09-05 20:31:20.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	SOUTHLAND PIPE CORP
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1230 W DURST DR
Owner/Operator City,State,Zip:	RIALTO, CA 92376-9102
Owner/Operator Telephone:	909-873-3820
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	CHRIS CARTWRIGHT
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1230 W DURST DR
Owner/Operator City,State,Zip:	RIALTO, CA 92376
Owner/Operator Telephone:	909-873-3820
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

SOUTHLAND PIPE CORP (Continued) **1024823156**

Historic Generators:
- Receive Date: 2009-05-15 00:00:00.0
- Handler Name: SOUTHLAND PIPE CORP
- Federal Waste Generator Description: Not a generator, verified
- State District Owner: Not reported
- Large Quantity Handler of Universal Waste: No
- Recognized Trader Importer: No
- Recognized Trader Exporter: No
- Spent Lead Acid Battery Importer: No
- Spent Lead Acid Battery Exporter: No
- Current Record: Yes
- Non Storage Recycler Activity: Not reported
- Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
- NAICS Code: 332996
- NAICS Description: FABRICATED PIPE AND PIPE FITTING MANUFACTURING

Facility Has Received Notices of Violations:
- Violations: No Violations Found

Evaluation Action Summary:
- Evaluations: No Evaluations Found

A2 Target Property **SOUTHLAND PIPE FABRICATION PL** **CIWQS** **S121675587**
1230 W DURST DR **N/A**
RIALTO, CA 92376

Site 2 of 5 in cluster A

Actual: 1232 ft.

CIWQS:
- Name: SOUTHLAND PIPE FABRICATION PL
- Address: 1230 W DURST DR
- City,State,Zip: RIALTO, CA 92376
- Agency: Southland Pipe Corp
- Agency Address: PO Box 97, Upland, CA 91785
- Place/Project Type: Construction - Industrial
- SIC/NAICS: Not reported
- Region: 8
- Program: CONSTW
- Regulatory Measure Status: Terminated
- Regulatory Measure Type: Storm water construction
- Order Number: 99-08DW
- WDID: 8 36C316239
- NPDES Number: CAS000002
- Adoption Date: 01/01/1900
- Effective Date: 08/06/2001
- Termination Date: 08/26/2002
- Expiration/Review Date: 01/01/1900
- Design Flow: Not reported
- Major/Minor: Not reported
- Complexity: Not reported
- TTWQ: Not reported
- Enforcement Actions within 5 years: 0
- Violations within 5 years: 0

SOUTHLAND PIPE FABRICATION PL (Continued) **S121675587**

Latitude: 34.094228
Longitude: -117.394991

A3 Target Property **SOUTHLAND PIPE CORP**
1230 W DURST DR
RIALTO, CA 92376

HWTS **S124876700**
N/A

Site 3 of 5 in cluster A

Actual: 1232 ft.

HWTS:

Name:	SOUTHLAND PIPE CORP
Address:	1230 W DURST DR
Address 2:	Not reported
City,State,Zip:	RIALTO, CA 923769102
EPA ID:	CAL000343047
Inactive Date:	Not reported
Create Date:	05/15/2009
Last Act Date:	12/18/2019
Mailing Name:	Not reported
Mailing Address:	PO BOX 9437
Mailing Address 2:	Not reported
Mailing City,State,Zip:	ALTA LOMA, CA 917018437
Owner Name:	SOUTHLAND PIPE CORP
Owner Address:	1230 W DURST DR
Owner Address 2:	Not reported
Owner City,State,Zip:	RIALTO, CA 923769102
Contact Name:	CHRIS CARTWRIGHT
Contact Address:	1230 W DURST DR
Contact Address 2:	Not reported
City,State,Zip:	RIALTO, CA 92376

NAICS:

EPA ID:	CAL000343047
Create Date:	2009-05-15 12:59:21.207
NAICS Code:	332996
NAICS Description:	Fabricated Pipe and Pipe Fitting Manufacturing
Issued EPA ID Date:	2009-05-15 12:59:21.19000
Inactive Date:	Not reported
Facility Name:	SOUTHLAND PIPE CORP
Facility Address:	1230 W DURST DR
Facility Address 2:	Not reported
Facility City:	RIALTO
Facility County:	Not reported
Facility State:	CA
Facility Zip:	923769102

A4 **SOUTHLAND PIPE CORP** **NPDES** **S105298568**
Target **1230 DURST DRIVE** **San Bern. Co. Permit** **N/A**
Property **RIALTO, CA 92376** **CIWQS**
CERS

Site 4 of 5 in cluster A

Actual:
1232 ft.

NPDES:

Name:	SOUTHLAND PIPE CORP
Address:	1230 DURST DRIVE
City,State,Zip:	RIALTO, CA 92376
Facility Status:	Not reported
NPDES Number:	Not reported
Region:	Not reported
Agency Number:	Not reported
Regulatory Measure ID:	Not reported
Place ID:	Not reported
Order Number:	Not reported
WDID:	8 36I024180
Regulatory Measure Type:	Industrial
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	Not reported
Discharge Name:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Status:	Active
Status Date:	04/04/2013
Operator Name:	Southland Pipe Corp
Operator Address:	P O Box 9437
Operator City:	Alta Loma
Operator State:	California
Operator Zip:	91701

NPDES as of 03/2018:

NPDES Number:	CAS000001
Status:	Active
Agency Number:	0
Region:	8
Regulatory Measure ID:	436415
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	8 36I024180
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	04/04/2013
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Southland Pipe Corp
Discharge Address:	P O Box 9437
Discharge City:	Alta Loma
Discharge State:	California
Discharge Zip:	91701
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported

SOUTHLAND PIPE CORP (Continued) **S105298568**

Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported

SOUTHLAND PIPE CORP (Continued) **S105298568**

Region:	8
Regulatory Measure ID:	436415
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	8 36I024180
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	04/04/2013
Processed Date:	04/04/2013
Status:	Active
Status Date:	04/04/2013
Place Size:	10
Place Size Unit:	Acres
Contact:	Chris Cartwright
Contact Title:	General Manager
Contact Phone:	909-873-3820
Contact Phone Ext:	Not reported
Contact Email:	chris@southlandpipe.com
Operator Name:	Southland Pipe Corp
Operator Address:	P O Box 9437
Operator City:	Alta Loma
Operator State:	California
Operator Zip:	91701
Operator Contact:	Chris Cartwright
Operator Contact Title:	General Manager
Operator Contact Phone:	909-873-3820
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	chris@southlandpipe.com
Operator Type:	Private Business
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported

SOUTHLAND PIPE CORP (Continued) **S105298568**

Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	Santa Ana River
Certifier:	Chris Cartwright
Certifier Title:	Vice President
Certification Date:	23-JUN-15
Primary Sic:	3498-Fabricated Pipe and Pipe Fittings
Secondary Sic:	3272-Concrete Products, Except Block and Brick
Tertiary Sic:	Not reported

Name:	SOUTHLAND PIPE CORP
Address:	1230 DURST DRIVE
City,State,Zip:	RIALTO, CA 92376
Facility Status:	Active
NPDES Number:	CAS000001
Region:	8
Agency Number:	0
Regulatory Measure ID:	436415
Place ID:	Not reported
Order Number:	97-03-DWQ
WDID:	8 36I024180
Regulatory Measure Type:	Enrollee
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	04/04/2013
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	P O Box 9437
Discharge Name:	Southland Pipe Corp
Discharge City:	Alta Loma
Discharge State:	California
Discharge Zip:	91701
Status:	Not reported
Status Date:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported

NPDES as of 03/2018:

NPDES Number:	CAS000001
Status:	Active
Agency Number:	0
Region:	8
Regulatory Measure ID:	436415
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	8 36I024180
Program Type:	Industrial

SOUTHLAND PIPE CORP (Continued) **S105298568**

Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	04/04/2013
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Southland Pipe Corp
Discharge Address:	P O Box 9437
Discharge City:	Alta Loma
Discharge State:	California
Discharge Zip:	91701
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported

SOUTHLAND PIPE CORP (Continued) **S105298568**

Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	8
Regulatory Measure ID:	436415
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	8 36I024180
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	04/04/2013
Processed Date:	04/04/2013
Status:	Active
Status Date:	04/04/2013
Place Size:	10
Place Size Unit:	Acres
Contact:	Chris Cartwright
Contact Title:	General Manager
Contact Phone:	909-873-3820
Contact Phone Ext:	Not reported
Contact Email:	chris@southlandpipe.com
Operator Name:	Southland Pipe Corp
Operator Address:	P O Box 9437
Operator City:	Alta Loma
Operator State:	California
Operator Zip:	91701
Operator Contact:	Chris Cartwright
Operator Contact Title:	General Manager
Operator Contact Phone:	909-873-3820
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	chris@southlandpipe.com
Operator Type:	Private Business
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported

SOUTHLAND PIPE CORP (Continued) **S105298568**

Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	Santa Ana River
Certifier:	Chris Cartwright
Certifier Title:	Vice President
Certification Date:	23-JUN-15
Primary Sic:	3498-Fabricated Pipe and Pipe Fittings
Secondary Sic:	3272-Concrete Products, Except Block and Brick
Tertiary Sic:	Not reported

San Bern. Co. Permit:

Name:	SOUTHLAND PIPE CORP.
Address:	1230 DURST DR
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0006306
Owner:	DOUGLAS, LINDA
Permit Number:	PT0001146
Permit Category:	HAZARDOUS MATERIALS 4-10 CHEMICALS
Facility Status:	ACTIVE
Expiration Date:	12/31/2020

Name:	SOUTHLAND PIPE CORP.
Address:	1230 DURST DR
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0006306
Owner:	DOUGLAS, LINDA
Permit Number:	PT0001145
Permit Category:	CONDITIONALLY EXEMPT SM QTY GENERATOR
Facility Status:	INACTIVE
Expiration Date:	12/31/2015

Name:	SOUTHLAND PIPE CORP.
Address:	1230 DURST DR
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0006306

SOUTHLAND PIPE CORP (Continued) **S105298568**

Owner: DOUGLAS, LINDA
Permit Number: PT0025355
Permit Category: WASTE-GENERATING RECYCLER (ONSITE)
Facility Status: INACTIVE
Expiration Date: 12/31/2015

CIWQS:

Name:	SOUTHLAND PIPE CORP
Address:	1230 DURST DR
City,State,Zip:	RIALTO, CA 92376
Agency:	Southland Pipe Corp
Agency Address:	PO Box 97, Upland, CA 91784
Place/Project Type:	Construction
SIC/NAICS:	Not reported
Region:	8
Program:	CONSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water construction
Order Number:	2009-0009-DWQ
WDID:	8 36C350466
NPDES Number:	CAS000002
Adoption Date:	01/01/1900
Effective Date:	01/14/2008
Termination Date:	09/02/2010
Expiration/Review Date:	01/01/1900
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	Not reported
Longitude:	Not reported

Name:	SOUTHLAND PIPE CORP
Address:	1230 DURST DRIVE
City,State,Zip:	RIALTO, CA 92376
Agency:	Southland Pipe Corp
Agency Address:	P O Box 9437, Alta Loma, CA 91701
Place/Project Type:	Industrial - Fabricated Pipe and Pipe Fittings
SIC/NAICS:	3498(+)
Region:	8
Program:	INDSTW
Regulatory Measure Status:	Active
Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	8 36I024180
NPDES Number:	CAS000001
Adoption Date:	01/01/1900
Effective Date:	04/04/2013
Termination Date:	01/01/1900
Expiration/Review Date:	01/01/1900
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	3

SOUTHLAND PIPE CORP (Continued) **S105298568**

Violations within 5 years: 2
Latitude: 34.09555
Longitude: -117.39528

CERS:
Name: SOUTHLAND PIPE CORP.
Address: 1230 DURST DR
City,State,Zip: RIALTO, CA 92376
Site ID: 155543
CERS ID: 10044964
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 155543
Site Name: SOUTHLAND PIPE CORP.
Violation Date: 03-02-2015
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 03/04/2015. BUSINESS PLAN UPDATE WAS SUBMITTED TO "CERS" ON 3/4/2015. CB
Violation Division: San Bernardino County Fire Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 155543
Site Name: SOUTHLAND PIPE CORP.
Violation Date: 03-21-2018
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 04/12/2018. -Hazardous materials business plan (HMBP) has not been submitted since 11/16/2016, the HMBP must be submitted annually by March first of every year.
Violation Division: San Bernardino County Fire Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 155543
Site Name: SOUTHLAND PIPE CORP.
Violation Date: 03-21-2018
Citation: HSC 6.95 25508.1(a)-(f) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(f)
Violation Description: Failure to electronically update business plan within 30 days of any one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or business name. A substantial change in the handler’s operations that requires modification to any portion of the business plan.
Violation Notes: Returned to compliance on 04/12/2018. -Hazardous materials inventory submitted on CERS on 11/16/2016 is not consistent with what was observed on-site.

SOUTHLAND PIPE CORP (Continued) **S105298568**

Violation Division: San Bernardino County Fire Department
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-02-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: REGULAR INSPECTION, THIS BUSINESS NO LONGER APPEARS TO BE GENERATING HAZARDOUS WASTE.
Eval Division: San Bernardino County Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-02-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: REGULAR INSPECTION, THIS FACILITY NO LONGER APPEARS TO BE GENERATING OR RECYCLING USED OIL.
Eval Division: San Bernardino County Fire Department
Eval Program: HWRecycler
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-02-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: REGULAR INSPECTION.
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-21-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Enforcement Action:
Site ID: 155543
Site Name: SOUTHLAND PIPE CORP.
Site Address: 1230 DURST DR
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 03-02-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: HMRRP
Enf Action Source: CERS

SOUTHLAND PIPE CORP (Continued) **S105298568**

Coordinates:

Site ID:	155543
Facility Name:	SOUTHLAND PIPE CORP.
Env Int Type Code:	HMBP
Program ID:	10044964
Coord Name:	Not reported
Ref Point Type Desc:	Unknown
Latitude:	34.095551
Longitude:	-117.395279

Affiliation:

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	PO BOX 9437
Affiliation City:	ALTA LOMA
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91701
Affiliation Phone:	Not reported

Affiliation Type Desc:	CUPA District
Entity Name:	San Bernardino County Fire
Entity Title:	Not reported
Affiliation Address:	620 South E Street
Affiliation City:	San Bernardino
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92415-0153
Affiliation Phone:	(909) 386-8401

Affiliation Type Desc:	Parent Corporation
Entity Name:	SOuthland Pipe Corp.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Environmental Contact
Entity Name:	CHRIS CARTWRIGHT
Entity Title:	Not reported
Affiliation Address:	PO BOX 9437
Affiliation City:	ALTA LOMA
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91701
Affiliation Phone:	Not reported

Affiliation Type Desc:	Operator
Entity Name:	SOuthland Pipe Corp.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported

SOUTHLAND PIPE CORP (Continued) **S105298568**

Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (909) 873-3820

Affiliation Type Desc: Identification Signer
Entity Name: Chris Cartwright
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: DOUGLAS, LINDA
Entity Title: Not reported
Affiliation Address: 1047 DEBORAH STREET
Affiliation City: UPLAND
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 91785
Affiliation Phone: (909) 982-7470

Name: SOUTHLAND PIPE CORP
Address: 1230 DURST DRIVE
City,State,Zip: RIALTO, CA 92376
Site ID: 542963
CERS ID: 822359
CERS Description: Industrial Facility Storm Water

Violations:
Site ID: 542963
Site Name: Southland Pipe Corp
Violation Date: 07-16-2016
Citation: 2014-0057-DWQ - Industrial General Permit
Violation Description: SW - Late Report
Violation Notes: Failure to submit 2015 - 2016 Annual Report by due date
Violation Division: Water Boards
Violation Program: INDSTW
Violation Source: SMARTS

Site ID: 542963
Site Name: Southland Pipe Corp
Violation Date: 07-15-2019
Citation: 2014-0057-DWQ - Industrial General Permit
Violation Description: SW - Late Report
Violation Notes: Failure to submit the 2018-2019 Annual Report by July 15, 2019.
Violation Division: Water Boards
Violation Program: INDSTW
Violation Source: SMARTS

Evaluation:
Eval General Type: Compliance Sampling Inspection
Eval Date: 03-06-2019

SOUTHLAND PIPE CORP (Continued) **S105298568**

Violations Found: No
Eval Type: Industrial Storm Water Compliance Sampling
Eval Notes: Mr. Simpkins escorted the inspector around the site. Met briefly with Chis Cartwright who supplied the SWPPP for the site. The last visual observation available was 12/5/18. Monthly visual inspections and sampling is conducted by an outside company. Discharge of sediment laden water was observed from discharge locations D1 and D2. Samples were collected and tested in the office for turbidity. Both samples were greater than 1,000 NTU. Observed BMPs implemented at the site. At D2 there was a straw waddle across the discharge outlet on the inside of the wall. A sample was collected at the outside of the wall prior to comingling with the street flow and the flow from D3. There is a concrete channel that flows along the eastern property line. The head of this channel has silt screen and gravel bags around it. Along the channel there were several rows of straw waddles with gravel bags on top to weigh the waddles down. The velocity of the water pushed the waddles to one side where they did not perform their desired function. Sampled the discharge as it flowed outside the wall. A follow-up inspection during the next rain event is recommended after the discharger has had an opportunity to correct the deficiencies.
Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS

Enforcement Action:
Site ID: 542963
Site Name: Southland Pipe Corp
Site Address: 1230 DURST DRIVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 08-01-2016
Enf Action Type: Industrial Storm Water Enforcement
Enf Action Description: Industrial Storm Water Enforcement
Enf Action Notes: Failure to submit 2015-2016 Annual Report by 07/15/2016 due date.
Enf Action Division: Water Boards
Enf Action Program: INDSTW
Enf Action Source: SMARTS

Site ID: 542963
Site Name: Southland Pipe Corp
Site Address: 1230 DURST DRIVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 08-08-2019
Enf Action Type: Industrial Storm Water Enforcement
Enf Action Description: Industrial Storm Water Enforcement
Enf Action Notes: Failure to submit the 2018-2019 Annual Report by July 15, 2019.
Enf Action Division: Water Boards
Enf Action Program: INDSTW
Enf Action Source: SMARTS

Site ID: 542963
Site Name: Southland Pipe Corp
Site Address: 1230 DURST DRIVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 09-07-2016

SOUTHLAND PIPE CORP (Continued) **S105298568**

Enf Action Type:	Industrial Storm Water Enforcement
Enf Action Description:	Industrial Storm Water Enforcement
Enf Action Notes:	Failure to submit 2015-2016 Annual Report by 1st Notice of Non-Compliance due date, August 1, 2016.
Enf Action Division:	Water Boards
Enf Action Program:	INDSTW
Enf Action Source:	SMARTS

Affiliation:

Affiliation Type Desc:	Owner/Operator
Entity Name:	Southland Pipe Corp
Entity Title:	Operator
Affiliation Address:	P O Box 9437
Affiliation City:	Alta Loma
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91701
Affiliation Phone:	Not reported

A5 **SOUTHLAND PIPE CORP.** **FINDS** **1023208306**
Target **1230 DURST DR** **ECHO** **N/A**
Property **RIALTO, CA 92376**

Site 5 of 5 in cluster A

Actual:
1232 ft.

FINDS:
Registry ID: 110064935708

Click Here:

Environmental Interest/Information System:
US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.
STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1023208306
Registry ID:	110064935708
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110064935708
Name:	SOUTHLAND PIPE CORP.
Address:	1230 DURST DR
City,State,Zip:	RIALTO, CA 92376

B6 **SOLOMON COLORS INC** **CIWQS** **S109693826**
1250 W DURST DR **N/A**
< 1/8 **RIALTO, CA 92376**
1 ft.

Site 1 of 4 in cluster B

Relative: CIWQS:
Lower

Actual: Name:	SOLOMON COLORS INC
1226 ft. Address:	1250 W DURST DR
City,State,Zip:	RIALTO, CA 92376
Agency:	Solomon Colors Inc
Agency Address:	1250 W Durst Dr, Rialto, CA 92376
Place/Project Type:	Industrial - Minerals and Earths, Ground or Otherwise Treated
SIC/NAICS:	3295
Region:	8
Program:	INDSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	8 36I022216
NPDES Number:	CAS000001
Adoption Date:	01/01/1900
Effective Date:	07/14/2009
Termination Date:	01/02/2014
Expiration/Review Date:	01/01/1900
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	34.09423
Longitude:	-117.39542

B7 **WEST COAST STEEL & PROCESSING DBA MISSION METALS** **RCRA NonGen / NLR** **1025872982**
SSW **1251 DURST DR** **CAL000446106**
< 1/8 **RIALTO, CA 92376**
0.016 mi.
86 ft.

Site 2 of 4 in cluster B

Relative: RCRA NonGen / NLR:
Lower

Actual: Date Form Received by Agency:	2019-05-20 00:00:00.0
1226 ft. Handler Name:	WEST COAST STEEL & PROCESSING DBA MISSION METALS
Handler Address:	1251 DURST DR
Handler City,State,Zip:	RIALTO, CA 92376
EPA ID:	CAL000446106
Contact Name:	JOHN JACKSON
Contact Address:	1251 DURST DR
Contact City,State,Zip:	RIALTO, CA 92376
Contact Telephone:	909-421-4545
Contact Fax:	909-421-8822
Contact Email:	JACKSON@MISSIONMETALS.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities

WEST COAST STEEL & PROCESSING DBA MISSION METALS (Continued) **1025872982**

State District Owner:	Not reported
State District:	Not reported
Mailing Address:	3534 PHILADELPHIA
Mailing City,State,Zip:	CHINO, CA 91710
Owner Name:	ERIK GAMM
Owner Type:	Other
Operator Name:	JOHN JACKSON
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	Yes
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2019-06-28 17:27:14.0
Recognized Trader-Importer:	No

WEST COAST STEEL & PROCESSING DBA MISSION METALS (Continued) **1025872982**

Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	ERIK GAMM
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	3534 PHILADELPHIA
Owner/Operator City,State,Zip:	CHINO, CA 91710
Owner/Operator Telephone:	909-393-8405
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	JOHN JACKSON
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1251 DURST DR
Owner/Operator City,State,Zip:	RIALTO, CA 92376
Owner/Operator Telephone:	909-421-4545
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2019-05-20 00:00:00.0
Handler Name:	WEST COAST STEEL & PROCESSING DBA MISSION METALS
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	333415
NAICS Description:	AIR-CONDITIONING AND WARM AIR HEATING EQUIPMENT AND COMMERCIAL AND INDUSTRIAL REFRIGERATION EQUIPMENT MANUFACTURING

Facility Has Received Notices of Violations:

Violations:	No Violations Found

WEST COAST STEEL & PROCESSING DBA MISSION METALS (Continued) **1025872982**

Evaluation Action Summary:
Evaluations: No Evaluations Found

B8 **SOLOMON COLORS** **San Bern. Co. Permit** **S109849226**
SSW **1251 W DURST DR** **N/A**
< 1/8 **RIALTO, CA 92376**
0.016 mi.
86 ft. **Site 3 of 4 in cluster B**

Relative:
Lower

Actual:
1226 ft.

San Bern. Co. Permit:
Name: SOLOMON COLORS
Address: 1251 W DURST DR
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0008537
Owner: Rich Solomon
Permit Number: PT0014836
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 05/31/2013

B9 **SOLOMON COLORS INC** **CERS HAZ WASTE** **S124876266**
SSW **1251 W DURST DR** **NPDES** **N/A**
< 1/8 **RIALTO, CA 92376** **CIWQS**
0.016 mi. **CERS**
86 ft. **Site 4 of 4 in cluster B** **HWTS**

Relative:
Lower

Actual:
1226 ft.

CERS HAZ WASTE:
Name: MISSION METALS
Address: 1251 W DURST DR
City,State,Zip: RIALTO, CA 92376
Site ID: 565927
CERS ID: 10841848
CERS Description: Hazardous Waste Generator

NPDES:
Name: MISSION METALS
Address: 1251 WEST DURST DRIVE
City,State,Zip: RIALTO, CA 92376
Facility Status: Not reported
NPDES Number: Not reported
Region: Not reported
Agency Number: Not reported
Regulatory Measure ID: Not reported
Place ID: Not reported
Order Number: Not reported
WDID: 8 36NEC006632
Regulatory Measure Type: Industrial
Program Type: Not reported
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: Not reported
Termination Date Of Regulatory Measure: Not reported
Expiration Date Of Regulatory Measure: Not reported
Discharge Address: Not reported

SOLOMON COLORS INC (Continued) **S124876266**

Discharge Name:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Status:	Active
Status Date:	05/05/2020
Operator Name:	West Coast Steel and Processing LLC
Operator Address:	3534 Philadelphia Street
Operator City:	Chino
Operator State:	California
Operator Zip:	91710
Name:	MISSION METALS
Address:	1251 WEST DURST DRIVE
City,State,Zip:	RIALTO, CA 92376
Facility Status:	Active
NPDES Number:	CAS000001
Region:	8
Agency Number:	0
Regulatory Measure ID:	520605
Place ID:	Not reported
Order Number:	97-03-DWQ
WDID:	8 36NEC006632
Regulatory Measure Type:	Enrollee
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	05/05/2020
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	3534 Philadelphia Street
Discharge Name:	West Coast Steel and Processing LLC
Discharge City:	Chino
Discharge State:	California
Discharge Zip:	91710
Status:	Not reported
Status Date:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported

CIWQS:

Name:	MISSION METALS
Address:	1251 WEST DURST DRIVE
City,State,Zip:	RIALTO, CA 92376
Agency:	West Coast Steel and Processing LLC
Agency Address:	3534 Philadelphia Street, Chino, CA 91710
Place/Project Type:	Industrial - Sheet Metal Work
SIC/NAICS:	3444
Region:	8
Program:	INDSTW
Regulatory Measure Status:	Active
Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	8 36NEC006632
NPDES Number:	CAS000001

SOLOMON COLORS INC (Continued) **S124876266**

Adoption Date:	01/01/1900
Effective Date:	05/05/2020
Termination Date:	01/01/1900
Expiration/Review Date:	01/01/1900
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	34.093849
Longitude:	-117.395354

CERS:

Name:	MISSION METALS
Address:	1251 W DURST DR
City,State,Zip:	RIALTO, CA 92376
Site ID:	565927
CERS ID:	10841848
CERS Description:	Chemical Storage Facilities

Affiliation:

Affiliation Type Desc:	Parent Corporation
Entity Name:	WEST COAST STEEL & PROCESSING
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	CUPA District
Entity Name:	San Bernardino County Fire
Entity Title:	Not reported
Affiliation Address:	620 South E Street
Affiliation City:	San Bernardino
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92415-0153
Affiliation Phone:	(909) 386-8401

HWTS:

Name:	SOLOMON COLORS INC
Address:	1251 W DURST DR
Address 2:	Not reported
City,State,Zip:	RIALTO, CA 923769110
EPA ID:	CAL000342186
Inactive Date:	06/30/2013
Create Date:	04/13/2009
Last Act Date:	10/15/2013
Mailing Name:	Not reported
Mailing Address:	PO BOX 8288
Mailing Address 2:	Not reported
Mailing City,State,Zip:	SPRINGFIELD, IL 627910000
Owner Name:	SOLOMON COLORS INC

SOLOMON COLORS INC (Continued) **S124876266**

Owner Address: 4050 COLOR PLANT RD
Owner Address 2: Not reported
Owner City,State,Zip: SPRINGFIELD, IL 627021060
Contact Name: MICHAEL PERCHEZ
Contact Address: 1251 W DURST DR
Contact Address 2: Not reported
City,State,Zip: RIALTO, CA 923769110

NAICS:
EPA ID: CAL000342186
Create Date: 2009-04-13 10:45:06.263
NAICS Code: 327992
NAICS Description: Ground or Treated Mineral and Earth Manufacturing
Issued EPA ID Date: 2009-04-13 10:45:06.18700
Inactive Date: 2013-06-30 00:00:00
Facility Name: SOLOMON COLORS INC
Facility Address: 1251 W DURST DR
Facility Address 2: Not reported
Facility City: RIALTO
Facility County: Not reported
Facility State: CA
Facility Zip: 923769110

C10 **FARR CO** **CERS HAZ WASTE** **S106830980**
WSW **300 S CEDAR AV** **CERS TANKS** **N/A**
< 1/8 **RIALTO, CA 92376** **EMI**
0.079 mi. **San Bern. Co. Permit**
417 ft. **Site 1 of 3 in cluster C** **CERS**

Relative: Lower
Actual: 1230 ft.

CERS HAZ WASTE:
Name: MARTINEZ & TUREK INC.
Address: 300 S CEDAR AVE
City,State,Zip: RIALTO, CA 92376
Site ID: 133206
CERS ID: 10041775
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: MARTINEZ & TUREK INC.
Address: 300 S CEDAR AVE
City,State,Zip: RIALTO, CA 92376
Site ID: 133206
CERS ID: 10041775
CERS Description: Aboveground Petroleum Storage

EMI:
Name: FARR CO
Address: 300 S CEDAR ST
City,State,Zip: RIALTO, CA 92376
Year: 1987
County Code: 36
Air Basin: SC
Facility ID: 54181
Air District Name: SC
SIC Code: 3444
Air District Name: SOUTH COAST AQMD

FARR CO (Continued) **S106830980**

Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	25
Reactive Organic Gases Tons/Yr:	22
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FARR CO
Address:	300 S CEDAR ST
City,State,Zip:	RIALTO, CA 92376
Year:	1990
County Code:	36
Air Basin:	SC
Facility ID:	54181
Air District Name:	SC
SIC Code:	3444
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	9
Reactive Organic Gases Tons/Yr:	8
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FARR CO
Address:	300 S CEDAR AV
City,State,Zip:	RIALTO, CA 92376
Year:	1993
County Code:	36
Air Basin:	SC
Facility ID:	54181
Air District Name:	SC
SIC Code:	3444
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	4
Reactive Organic Gases Tons/Yr:	4
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FARR CO
Address:	300 S CEDAR AV
City,State,Zip:	RIALTO, CA 92376
Year:	1995
County Code:	36
Air Basin:	SC
Facility ID:	54181

FARR CO (Continued) **S106830980**

Air District Name:	SC
SIC Code:	3444
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	4
Reactive Organic Gases Tons/Yr:	4
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

San Bern. Co. Permit:

Name:	MARTINEZ & TUREK INC.
Address:	300 S CEDAR AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0004601
Owner:	MARTINEZ, LARRY TUREK, TRIBE, LLC
Permit Number:	PT0003630
Permit Category:	SMALL QUANTITY GENERATOR
Facility Status:	ACTIVE
Expiration Date:	10/31/2021

Name:	MARTINEZ & TUREK INC.
Address:	300 S CEDAR AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0004601
Owner:	MARTINEZ, LARRY TUREK, TRIBE, LLC
Permit Number:	PT0003629
Permit Category:	HAZARDOUS MATERIALS 4-10 CHEMICALS
Facility Status:	ACTIVE
Expiration Date:	10/31/2021

Name:	MARTINEZ & TUREK INC.
Address:	300 S CEDAR AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0004601
Owner:	MARTINEZ, LARRY TUREK, TRIBE, LLC
Permit Number:	PT0035539
Permit Category:	APSA 1,320-10,000 GAL FAC CAPACITY
Facility Status:	ACTIVE
Expiration Date:	10/31/2021

CERS:

Name:	MARTINEZ & TUREK INC.
Address:	300 S CEDAR AVE
City,State,Zip:	RIALTO, CA 92376
Site ID:	133206
CERS ID:	10041775
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	133206

FARR CO (Continued) **S106830980**

Site Name: MARTINEZ & TUREK INC.
Violation Date: 10-27-2015
Citation: HSC 6.5 Multiple Sections - California Health and Safety Code, Chapter 6.5, Section(s) Multiple Sections
Violation Description: Haz Waste Generator Program - Operations/Maintenance - General
Violation Notes: Returned to compliance on 05/17/2016. Failure to note accumulation start date on labels (CCR 66262.34(f)(2)) Accumulation start date missing on paint waste.
Violation Division: San Bernardino County Fire Department
Violation Program: HW
Violation Source: CERS

Site ID: 133206
Site Name: MARTINEZ & TUREK INC.
Violation Date: 11-15-2018
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description: Failure to prepare a Spill Prevention, Control, and Countermeasures (SPCC) Plan.
Violation Notes: Returned to compliance on 03/08/2019. OBSERVATION: Facilities that store aboveground storage capacities of petroleum products at or exceeding 1,320 gal are subject to APSA. Facilities that are subject to APSA must prepare a SPill Prevention, Control and Countermeasure (SPCC) Plan in accordance with the oil pollution prevention guidelines in the Federal Code of Regulations (40 CFR 112). At the time of inspection, it was observed that this facility stores approximately 1,685 gal of petroleum product on site and has not prepared an SPCC Plan. CORRECTIVE ACTION: Prepare and implement an SPCC Plan. Maintain the plan on site and submit the signed certificate of compliance indicating that an SPCC Plan has been prepared and implemented. Facility meets the requirements to use a TIER 1 SPCC Plan template and to self certify plan.
Violation Division: San Bernardino County Fire Department
Violation Program: APSA
Violation Source: CERS

Site ID: 133206
Site Name: MARTINEZ & TUREK INC.
Violation Date: 10-27-2015
Citation: HSC 6.5 Multiple Sections - California Health and Safety Code, Chapter 6.5, Section(s) Multiple Sections
Violation Description: Haz Waste Generator Program - Operations/Maintenance - General
Violation Notes: Returned to compliance on 05/17/2016. Failure to label hazardous waste containers (CCR 66262.34(f)(3)) Paint waste container missing hazardous waste label
Violation Division: San Bernardino County Fire Department
Violation Program: HW
Violation Source: CERS

Site ID: 133206
Site Name: MARTINEZ & TUREK INC.
Violation Date: 11-15-2018
Citation: HSC 6.95 25508(a)(3) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(3)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.

FARR CO (Continued) **S106830980**

Violation Notes:	Returned to compliance on 02/26/2019. OBSERVATION: The inventory observed on site was not consistent wit the inventory submitted via CERS on 4/25/18. CORRECTIVE ACTION: Submit an accurate and complete hazardous materials inventory via CERS.
Violation Division:	San Bernardino County Fire Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	133206
Site Name:	MARTINEZ & TUREK INC.
Violation Date:	10-27-2015
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan .
Violation Notes:	Returned to compliance on 05/17/2016. SPCC plan not implemented.
Violation Division:	San Bernardino County Fire Department
Violation Program:	APSA
Violation Source:	CERS
Site ID:	133206
Site Name:	MARTINEZ & TUREK INC.
Violation Date:	10-27-2015
Citation:	HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description:	Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 05/17/2016. Facility did not submit a Business Plan to CERS
Violation Division:	San Bernardino County Fire Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	133206
Site Name:	MARTINEZ & TUREK INC.
Violation Date:	11-15-2018
Citation:	22 CCR 12 66262.11 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.11
Violation Description:	Failure to determine if wastes generated are hazardous waste by using generator knowledge or applying testing method.
Violation Notes:	Returned to compliance on 02/26/2019. OBSERVATION: Observed (4) 250 gal totes of used coolant labeled with complete hazardous waste labels, however during the document review it was found that the used coolant is being managed and hauled off as non hazardous waste. The generator of a waste must determine whether the waste is hazardous waste by determining whether it is included on one of the lists of materials classified as hazardous wastes or meets the criteria for one or more characteristics (i.e, ignitability, reactivity, corrosiveness, or toxicity) that would make it hazardous waste by either (1) Having the waste tested by a laboratory certified by the State of California to perform waste determination analysis or (2) Applying the generator's knowledge of the hazardous properties of the waste. CORRECTIVE ACTION: Complete a waste determination on the used coolant and submit copies of analytical results or statement documenting generator knowledge showing the used coolant is hazardous or non-hazardous.

FARR CO (Continued) **S106830980**

Violation Division: San Bernardino County Fire Department
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-27-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: ROUTINE APSA INSPECTION
Eval Division: San Bernardino County Fire Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-27-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: ROUTINE GENERATOR INSPECTION
Eval Division: San Bernardino County Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-27-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: ROUTINE HANDLER INSPECTION
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-15-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-15-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-15-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: HW

FARR CO (Continued) **S106830980**

Eval Source: CERS

Enforcement Action:
Site ID: 133206
Site Name: MARTINEZ & TUREK INC.
Site Address: 300 S CEDAR AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 10-27-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: APSA
Enf Action Source: CERS

Site ID: 133206
Site Name: MARTINEZ & TUREK INC.
Site Address: 300 S CEDAR AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 10-27-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 133206
Site Name: MARTINEZ & TUREK INC.
Site Address: 300 S CEDAR AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 10-27-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: HW
Enf Action Source: CERS

Coordinates:
Site ID: 133206
Facility Name: MARTINEZ & TUREK INC.
Env Int Type Code: HWG
Program ID: 10041775
Coord Name: Not reported
Ref Point Type Desc: Unknown
Latitude: 34.094852
Longitude: -117.397758

Affiliation:
Affiliation Type Desc: Document Preparer
Entity Name: PAM ROBBINS
Entity Title: Not reported

FARR CO (Continued) **S106830980**

Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	PAM ROBBINS
Entity Title:	Not reported
Affiliation Address:	300 S CEDAR AVE
Affiliation City:	RIALTO
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92376
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	300 SOUTH CEDAR AVE
Affiliation City:	RIALTO
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92376-9102
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Martinez & Turek, Inc.
Entity Title:	Not reported
Affiliation Address:	300 S. CEDAR AVE
Affiliation City:	RIALTO
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92376
Affiliation Phone:	(909) 820-6800
Affiliation Type Desc:	Operator
Entity Name:	Martinez & Turek, Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(909) 820-6800
Affiliation Type Desc:	CUPA District
Entity Name:	San Bernardino County Fire
Entity Title:	Not reported
Affiliation Address:	620 South E Street
Affiliation City:	San Bernardino
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92415-0153
Affiliation Phone:	(909) 386-8401

FARR CO (Continued) **S106830980**

Affiliation Type Desc: Parent Corporation
Entity Name: MARTINEZ & TUREK INC.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: MARTINEZ & TUREK, INC.
Entity Title: Not reported
Affiliation Address: 300 S. CEDAR AVE
Affiliation City: RIALTO
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92376
Affiliation Phone: (909) 820-6800

Affiliation Type Desc: Identification Signer
Entity Name: PAM ROBBINS
Entity Title: PAYROLL MANAGER
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: MARTINEZ & TUREK, INC.
Address: 300 SOUTH CEDAR AVENUE
City,State,Zip: RIALTO, CA 92376-9100
Site ID: 479413
CERS ID: 110013826832
CERS Description: US EPA Air Emission Inventory System (EIS)

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: DEBRA CIPOLLONE
Entity Title: Not reported
Affiliation Address: 300 S CEDAR AVE
Affiliation City: RIALTO
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

C11
WSW
< 1/8
0.079 mi.
417 ft.

MARTINEZ & TUREK INC
300 S CEDAR AVE
RIALTO, CA 92376

Site 2 of 3 in cluster C

RCRA NonGen / NLR **1024795976**
CAL000171754

Relative:
Lower

Actual:
1230 ft.

RCRA NonGen / NLR:

Date Form Received by Agency:		1997-11-18 00:00:00.0
Handler Name:	MARTINEZ & TUREK INC	
Handler Address:		300 S CEDAR AVE
Handler City,State,Zip:		RIALTO, CA 92376-0000
EPA ID:		CAL000171754
Contact Name:		RUBEN VASQUEZ
Contact Address:		300 S CEDAR AVE
Contact City,State,Zip:		RIALTO, CA 92376
Contact Telephone:		909-820-6800
Contact Fax:		909-873-3748
Contact Email:		RVASQUEZ@MARTINEZANDTUREK.COM
Contact Title:		Not reported
EPA Region:		09
Land Type:		Not reported
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities
State District Owner:		Not reported
State District:		Not reported
Mailing Address:		300 S CEDAR AVE
Mailing City,State,Zip:		RIALTO, CA 92376-0000
Owner Name:		MARTINEZ & TUREK INC
Owner Type:		Other
Operator Name:		RUBEN VASQUEZ
Operator Type:		Other
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		Yes
Universal Waste Destination Facility:		Yes
Federal Universal Waste:		No
Active Site Fed-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site Converter Treatment storage and Disposal Facility:		Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site State-Reg Handler:		---
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		N
Sub-Part K Indicator:		Not reported
Commercial TSD Indicator:		No
Treatment Storage and Disposal Type:		Not reported
2018 GPRA Permit Baseline:		Not on the Baseline
2018 GPRA Renewals Baseline:		Not on the Baseline
Permit Renewals Workload Universe:		Not reported

MARTINEZ & TUREK INC (Continued) **1024795976**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-09-05 15:43:48.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	RUBEN VASQUEZ
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	300 S CEDAR AVE
Owner/Operator City,State,Zip:	RIALTO, CA 92376
Owner/Operator Telephone:	909-820-6800
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	MARTINEZ & TUREK INC
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	300 S CEDAR AVE
Owner/Operator City,State,Zip:	RIALTO, CA 92376-0000
Owner/Operator Telephone:	909-820-6800
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

MARTINEZ & TUREK INC (Continued) **1024795976**

Historic Generators:
- Receive Date: 1997-11-18 00:00:00.0
- Handler Name: MARTINEZ & TUREK INC
- Federal Waste Generator Description: Not a generator, verified
- State District Owner: Not reported
- Large Quantity Handler of Universal Waste: No
- Recognized Trader Importer: No
- Recognized Trader Exporter: No
- Spent Lead Acid Battery Importer: No
- Spent Lead Acid Battery Exporter: No
- Current Record: Yes
- Non Storage Recycler Activity: Not reported
- Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
- NAICS Code: 335222
- NAICS Description: HOUSEHOLD REFRIGERATOR AND HOME FREEZER MANUFACTURING

Facility Has Received Notices of Violations:
- Violations: No Violations Found

Evaluation Action Summary:
- Evaluations: No Evaluations Found

C12 **FARR COMPANY RIALTO PLANT** **RCRA-SQG** **1000351103**
WSW **300 S CEDAR AVE** **HAZNET** **CAD982028383**
< 1/8 **RIALTO, CA 92376** **HWTS**
0.079 mi.
417 ft. **Site 3 of 3 in cluster C**

Relative: **Lower**

Actual: **1230 ft.**

RCRA-SQG:
- Date Form Received by Agency: 1996-09-01 00:00:00.0
- Handler Name: FARR COMPANY RIALTO PLANT
- Handler Address: 300 S CEDAR AVE
- Handler City,State,Zip: RIALTO, CA 92376
- EPA ID: CAD982028383
- Contact Name: Not reported
- Contact Address: Not reported
- Contact City,State,Zip: Not reported
- Contact Telephone: Not reported
- Contact Fax: Not reported
- Contact Email: Not reported
- Contact Title: Not reported
- EPA Region: 09
- Land Type: Not reported
- Federal Waste Generator Description: Small Quantity Generator
- Non-Notifier: Not reported
- Biennial Report Cycle: Not reported
- Accessibility: Not reported
- Active Site Indicator: Handler Activities
- State District Owner: CA
- State District: 4
- Mailing Address: 300 S CEDAR AVE
- Mailing City,State,Zip: RIALTO, CA 92376
- Owner Name: Not reported

FARR COMPANY RIALTO PLANT (Continued) **1000351103**

Owner Type:	Not reported
Operator Name:	NOT REQUIRED
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2002-06-27 03:32:30.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported

FARR COMPANY RIALTO PLANT (Continued) **1000351103**

Sub-Part P Indicator: Not reported

Handler - Owner Operator:
Owner/Operator Indicator: Operator
Owner/Operator Name: NOT REQUIRED
Legal Status: Private
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: NOT REQUIRED
Owner/Operator City,State,Zip: NOT REQUIRED, ME 99999
Owner/Operator Telephone: 415-555-1212
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: FARR COMPANY
Legal Status: Private
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: NOT REQUIRED
Owner/Operator City,State,Zip: NOT REQUIRED, ME 99999
Owner/Operator Telephone: 415-555-1212
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 1996-09-01 00:00:00.0
Handler Name: FARR COMPANY RIALTO PLANT
Federal Waste Generator Description: Small Quantity Generator
State District Owner: CA
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1987-07-06 00:00:00.0
Handler Name: FARR COMPANY RIALTO PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: CA
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1992-03-16 00:00:00.0

FARR COMPANY RIALTO PLANT (Continued) **1000351103**

Handler Name: FARR COMPANY RIALTO PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 33341
NAICS Description: VENTILATION, HEATING, AIR-CONDITIONING, AND COMMERCIAL REFRIGERATION EQUIPMENT MANUFACTURING

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

HAZNET:
Name: FARR COMPANY RIALTO PLANT
Address: 300 S CEDAR AVE
Address 2: Not reported
City,State,Zip: RIALTO, CA 923760000
Contact: INACT PER 96 VQ AD
Telephone: --
Mailing Name: Not reported
Mailing Address: 300 S CEDAR AVE

Year: 1995
Gepaid: CAD982028383
TSD EPA ID: CAD008364432
CA Waste Code: 214 - Unspecified solvent mixture
Disposal Method: R01 - Recycler
Tons: 2.484

Year: 1995
Gepaid: CAD982028383
TSD EPA ID: CAD008364432
CA Waste Code: 352 - Other organic solids
Disposal Method: R01 - Recycler
Tons: 0.825

Year: 1995
Gepaid: CAD982028383
TSD EPA ID: CAD089446710
CA Waste Code: 223 - Unspecified oil-containing waste
Disposal Method: H01 - Transfer Station
Tons: 5.625

FARR COMPANY RIALTO PLANT (Continued) **1000351103**

Year:	1995
Gepaid:	CAD982028383
TSD EPA ID:	CAT080011059
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	R01 - Recycler
Tons:	5.7

Year:	1995
Gepaid:	CAD982028383
TSD EPA ID:	CAD044442985
CA Waste Code:	352 - Other organic solids
Disposal Method:	R01 - Recycler
Tons:	0.1

Year:	1995
Gepaid:	CAD982028383
TSD EPA ID:	CAD044442985
CA Waste Code:	214 - Unspecified solvent mixture
Disposal Method:	R01 - Recycler
Tons:	1.152

Year:	1995
Gepaid:	CAD982028383
TSD EPA ID:	CAD008364432
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	R01 - Recycler
Tons:	0.95

Year:	1995
Gepaid:	CAD982028383
TSD EPA ID:	CAD044442985
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	R01 - Recycler
Tons:	0.836

Year:	1994
Gepaid:	CAD982028383
TSD EPA ID:	CAD044442985
CA Waste Code:	352 - Other organic solids
Disposal Method:	T03 - Treatment, Incineration
Tons:	4.5

Year:	1992
Gepaid:	CAD982028383
TSD EPA ID:	CAD089446710
CA Waste Code:	214 - Unspecified solvent mixture
Disposal Method:	H01 - Transfer Station
Tons:	0.688

Click this hyperlink while viewing on your computer to access
11 additional CA HAZNET: record(s) in the EDR Site Report.

Additional Info:

Year:	1994
Gen EPA ID:	CAD982028383

FARR COMPANY RIALTO PLANT (Continued) **1000351103**

Shipment Date:	19941229
Creation Date:	10/20/1995 0:00:00
Receipt Date:	19950104
Manifest ID:	95270530
Trans EPA ID:	CAD008364432
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044442985
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D005
Meth Code:	T03 - Treatment, Incineration
Quantity Tons:	4.5
Waste Quantity:	9000
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1995
Gen EPA ID:	CAD982028383

Shipment Date:	19951024
Creation Date:	7/26/1996 0:00:00
Receipt Date:	19951026
Manifest ID:	95305983
Trans EPA ID:	CAT982518433
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD089446710
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	5.625
Waste Quantity:	11250
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19950320
Creation Date:	10/23/1995 0:00:00
Receipt Date:	19950321
Manifest ID:	93644283
Trans EPA ID:	CAD087169686

FARR COMPANY RIALTO PLANT (Continued) **1000351103**

Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080011059
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	5.7
Waste Quantity:	1500
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19950314
Creation Date:	10/23/1995 0:00:00
Receipt Date:	19950314
Manifest ID:	95177140
Trans EPA ID:	CAD008364432
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	F003
Meth Code:	R01 - Recycler
Quantity Tons:	0.45
Waste Quantity:	900
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19950314
Creation Date:	10/23/1995 0:00:00
Receipt Date:	19950314
Manifest ID:	95177140
Trans EPA ID:	CAD008364432
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001

FARR COMPANY RIALTO PLANT (Continued) **1000351103**

Meth Code:	R01 - Recycler
Quantity Tons:	0.144
Waste Quantity:	40
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19950314
Creation Date:	10/23/1995 0:00:00
Receipt Date:	19950314
Manifest ID:	95177140
Trans EPA ID:	CAD008364432
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	F003
Meth Code:	R01 - Recycler
Quantity Tons:	0.19
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19950302
Creation Date:	10/23/1995 0:00:00
Receipt Date:	19950302
Manifest ID:	93016581
Trans EPA ID:	CAD008364432
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044442985
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

FARR COMPANY RIALTO PLANT (Continued) **1000351103**

Shipment Date:	19950302
Creation Date:	10/23/1995 0:00:00
Receipt Date:	19950302
Manifest ID:	93016581
Trans EPA ID:	CAD008364432
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044442985
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	1.152
Waste Quantity:	320
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19950302
Creation Date:	10/23/1995 0:00:00
Receipt Date:	19950302
Manifest ID:	93016581
Trans EPA ID:	CAD008364432
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044442985
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	F003
Meth Code:	R01 - Recycler
Quantity Tons:	0.836
Waste Quantity:	220
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19950103
Creation Date:	10/20/1995 0:00:00
Receipt Date:	19950103
Manifest ID:	95270522
Trans EPA ID:	CAD008364432
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432

FARR COMPANY RIALTO PLANT (Continued) **1000351103**

Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.375
Waste Quantity:	750
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19950103
Creation Date:	10/20/1995 0:00:00
Receipt Date:	19950103
Manifest ID:	95270522
Trans EPA ID:	CAD008364432
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	F003
Meth Code:	R01 - Recycler
Quantity Tons:	0.76
Waste Quantity:	200
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWTS:

Name:	FARR COMPANY RIALTO PLANT
Address:	300 S CEDAR AVE
Address 2:	Not reported
City,State,Zip:	RIALTO, CA 923760000
EPA ID:	CAD982028383
Inactive Date:	06/30/1996
Create Date:	03/01/1988
Last Act Date:	09/14/2004
Mailing Name:	Not reported
Mailing Address:	300 S CEDAR AVE
Mailing Address 2:	Not reported
Mailing City,State,Zip:	RIALTO, CA 923769100
Owner Name:	FARR COMPANY RIALTO PLANT
Owner Address:	300 S CEDAR AVE
Owner Address 2:	Not reported
Owner City,State,Zip:	RIALTO, CA 923769100
Contact Name:	INACT PER 96 VQ AD

FARR COMPANY RIALTO PLANT (Continued) **1000351103**

Contact Address:	300 S CEDAR AVE
Contact Address 2:	Not reported
City,State,Zip:	RIALTO, CA 923769100

D13 **CHEVRON STN #308294/2002** **UST** **U004264020**
SSW **475 S CEDAR AVE** **N/A**
< 1/8 **RIALTO, CA 92376**
0.106 mi.
558 ft. **Site 1 of 3 in cluster D**

Relative: UST:
Lower

Name:	CHEVRON STN #308294/2002
Address:	475 S CEDAR AVE
City,State,Zip:	RIALTO, CA 92376
Facility ID:	FA0007798
Permitting Agency:	San Bernardino County Fire Department
Latitude:	34.092747
Longitude:	-117.395943

Actual:
1219 ft.

D14 **CHEVRON 308294** **RCRA-LQG** **1012176267**
SSW **475 S CEDAR AVE** **FINDS** **CAR000201707**
< 1/8 **RIALTA, CA 92376** **ECHO**
0.106 mi.
558 ft. **Site 2 of 3 in cluster D**

Relative: RCRA-LQG:
Lower

Date Form Received by Agency:		2009-07-14 00:00:00.0
Handler Name:	CHEVRON 308294	
Handler Address:		475 S CEDAR AVE
Handler City,State,Zip:		RIALTA, CA 92376
EPA ID:		CAR000201707
Contact Name:		JOCKO RODRIGUEZ
Contact Address:		PO BOX 6004
Contact City,State,Zip:		SAN RAMON, CA 94583
Contact Telephone:		925-842-3733
Contact Fax:		Not reported
Contact Email:		NAWTDESK@CHEVRON.COM
Contact Title:		Not reported
EPA Region:		09
Land Type:		Private
Federal Waste Generator Description:		Large Quantity Generator
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities
State District Owner:		Not reported
State District:		Not reported
Mailing Address:		PO BOX 6004
Mailing City,State,Zip:		SAN RAMON, CA 94583
Owner Name:		CHEVRON USA INC
Owner Type:		Private
Operator Name:		CHEVRON USA INC
Operator Type:		Private
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No

Actual:
1219 ft.

CHEVRON 308294 (Continued) **1012176267**

Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2009-07-20 13:16:09.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE

CHEVRON 308294 (Continued) **1012176267**

Waste Code: D018
Waste Description: BENZENE

Handler - Owner Operator:
Owner/Operator Indicator: Owner
Owner/Operator Name: CHEVRON USA INC
Legal Status: Private
Date Became Current: 2009-08-27 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: PO BOX 6004
Owner/Operator City,State,Zip: SAN RAMON, CA 94583
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: CHEVRON USA INC
Legal Status: Private
Date Became Current: 2009-08-27 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: Not reported
Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 2009-07-14 00:00:00.0
Handler Name: CHEVRON 308294
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 44711
NAICS Description: GASOLINE STATIONS WITH CONVENIENCE STORES

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

FINDS:

CHEVRON 308294 (Continued) **1012176267**

Registry ID: 110039524146

Click Here:

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.
STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1012176267
Registry ID: 110039524146
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110039524146
Name: CHEVRON 308294
Address: 475 S CEDAR AVE
City,State,Zip: RIALTO, CA 92376

D15 **JACK IN THE BOX INC/QUICK STUFF #7730** **CERS HAZ WASTE** **S113127704**
SSW **475 S CEDAR AVE** **CERS TANKS** **N/A**
< 1/8 **RIALTO, CA 92376** **HAZNET**
0.106 mi. **San Bern. Co. Permit**
558 ft. **Site 3 of 3 in cluster D** **CERS**
HWTS

Relative:
Lower

Actual:
1219 ft.

CERS HAZ WASTE:
Name: CHEVRON STN #308294/2002
Address: 475 S CEDAR AVE
City,State,Zip: RIALTO, CA 92376
Site ID: 105013
CERS ID: 10047505
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: CHEVRON STN #308294/2002
Address: 475 S CEDAR AVE
City,State,Zip: RIALTO, CA 92376
Site ID: 105013
CERS ID: 10047505
CERS Description: Underground Storage Tank

HAZNET:
Name: JACK IN THE BOX INC/QUICK STUFF #7730
Address: 475 S CEDAR AVE
Address 2: Not reported
City,State,Zip: RIALTO, CA 92376
Contact: DAN ERICKSON PROGRAM MANAGER
Telephone: 8478880276
Mailing Name: Not reported
Mailing Address: 2496 TECHNOLOGY DR

Year: 2009

JACK IN THE BOX INC/QUICK STUFF #7730 (Continued) **S113127704**

Gepaid:	CAL000273291
TSD EPA ID:	CAD982444481
CA Waste Code:	134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.315
Year:	2008
Gepaid:	CAL000273291
TSD EPA ID:	CAD028409019
CA Waste Code:	214 - Unspecified solvent mixture
Disposal Method:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons:	0.234
Year:	2007
Gepaid:	CAL000273291
TSD EPA ID:	CAD982444481
CA Waste Code:	133 - Aqueous solution with total organic residues 10 percent or more
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.6255
Year:	2005
Gepaid:	CAL000273291
TSD EPA ID:	CAD982444481
CA Waste Code:	134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method:	T01 - Treatment, Tank
Tons:	0.315

Additional Info:

Year:	2005
Gen EPA ID:	CAL000273291
Shipment Date:	20050729
Creation Date:	4/13/2006 18:45:56
Receipt Date:	20050801
Manifest ID:	24509894
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	T01 - Treatment, Tank
Quantity Tons:	0.315
Waste Quantity:	75
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

JACK IN THE BOX INC/QUICK STUFF #7730 (Continued) **S113127704**

Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2007
Gen EPA ID:	CAL000273291
Shipment Date:	20070307
Creation Date:	8/11/2007 18:30:20
Receipt Date:	20070308
Manifest ID:	000457276JJK
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.6255
Waste Quantity:	150
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2009
Gen EPA ID:	CAL000273291
Shipment Date:	20090826
Creation Date:	10/29/2009 18:30:19
Receipt Date:	20090827
Manifest ID:	006060792JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.315
Waste Quantity:	75
Quantity Unit:	G
Additional Code 1:	Not reported

JACK IN THE BOX INC/QUICK STUFF #7730 (Continued) **S113127704**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2008
Gen EPA ID:	CAL000273291
Shipment Date:	20080320
Creation Date:	7/2/2008 18:30:07
Receipt Date:	20080328
Manifest ID:	000455555JJK
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY & OVERTON INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D018
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.234
Waste Quantity:	65
Quantity Unit:	G
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

San Bern. Co. Permit:

Name:	CHEVRON STN #308294/2002
Address:	475 S CEDAR AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0007798
Owner:	CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON U.S.A. INC.)
Permit Number:	PT0014228
Permit Category:	REGULAR UST ANNUAL INSPECTION (PER TANK)
Facility Status:	ACTIVE
Expiration Date:	10/31/2021

Name:	CHEVRON STN #308294/2002
Address:	475 S CEDAR AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0007798
Owner:	CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON U.S.A. INC.)
Permit Number:	PT0014229
Permit Category:	REGULAR UST ANNUAL INSPECTION (PER TANK)
Facility Status:	ACTIVE
Expiration Date:	10/31/2021

JACK IN THE BOX INC/QUICK STUFF #7730 (Continued) **S113127704**

Name: CHEVRON STN #308294/2002
Address: 475 S CEDAR AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0007798
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON U.S.A. INC.)
Permit Number: PT0014230
Permit Category: REGULAR UST ANNUAL INSPECTION (PER TANK)
Facility Status: ACTIVE
Expiration Date: 10/31/2021

Name: CHEVRON STN #308294/2002
Address: 475 S CEDAR AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0007798
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON U.S.A. INC.)
Permit Number: PT0020287
Permit Category: WASTE INCIDENTAL UST OPERATION ONLY -PER YEAR
Facility Status: ACTIVE
Expiration Date: 10/31/2021

Name: CHEVRON STN #308294/2002
Address: 475 S CEDAR AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0007798
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON U.S.A. INC.)
Permit Number: PT0014226
Permit Category: HAZMAT HANDLER, UST ONLY - PER YEAR
Facility Status: ACTIVE
Expiration Date: 10/31/2021

CERS:
Name: CHEVRON STN #308294/2002
Address: 475 S CEDAR AVE
City,State,Zip: RIALTO, CA 92376
Site ID: 105013
CERS ID: 10047505
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 105013
Site Name: CHEVRON STN #308294/2002
Violation Date: 06-05-2014
Citation: HSC 6.7 25292(e) - California Health and Safety Code, Chapter 6.7, Section(s) 25292(e)
Violation Description: Failure to install line leak detector on pressurized piping system.
Violation Notes: Returned to compliance on 06/05/2014. 87 MLLD FAILED WHEN INITIALLY TESTED. INOPERABLE MLLD WAS REPLACED "LIKE FOR LIKE" BY THE UST TECHNICIAN AND PASSED UPON RETEST.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 105013
Site Name: CHEVRON STN #308294/2002

JACK IN THE BOX INC/QUICK STUFF #7730 (Continued) **S113127704**

Violation Date:	05-29-2015
Citation:	HSC 6.7 25290.1(h), 25290.2(g), 25291(f), 25292(e) - California Health and Safety Code, Chapter 6.7, Section(s) 25290.1(h), 25290.2(g), 25291(f), 25292(e)
Violation Description:	Failure to install line leak detector.
Violation Notes:	Returned to compliance on 05/29/2015. OBSERVATION: THE 87 MECHANICAL LINE LEAK DETECTOR FAILED WHEN TESTED. COMPLIANCE MET ON SITE: TECHNICIAN REPLACED RE-TESTED NEW DETECTOR.-PASSED
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	105013
Site Name:	CHEVRON STN #308294/2002
Violation Date:	06-05-2014
Citation:	23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665
Violation Description:	Failure to comply with one or more of the following: failure to install a spill bucket, have a functional drain valve or other method for the removal of liquid from the spill bucket/spill container, and/or be resistant to galvanic corrosion.
Violation Notes:	Returned to compliance on 06/05/2014. 87 FILL SPILL BUCKET FAILED WHEN INITIALLY TESTED DUE TO AN INOPERABLE DRAIN VALVE. THE INOPERABLE DRAIN VALVE WAS REPLACED BY THE UST TECHNICIAN AND SPILL BUCKET PASSED UPON RETEST
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	105013
Site Name:	CHEVRON STN #308294/2002
Violation Date:	05-29-2015
Citation:	HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2
Violation Description:	Failure to test the spill bucket annually.
Violation Notes:	Returned to compliance on 05/29/2015. OBSERVATION: THE 87 & 91 OVERSPILL BUCKET FAILED WHEN TESTED. COMPLIANCE REQUIREMENT: SUBMIT WORK ORDER DOCUMENTING THE REPAIR/ REPLACEMENT AND THE FUNCTIONALITY OF THE 87 & 91 OVERSPILL BUCKETS.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	105013
Site Name:	CHEVRON STN #308294/2002
Violation Date:	05-15-2018
Citation:	HSC 6.7 25291(b) - California Health and Safety Code, Chapter 6.7, Section(s) 25291(b)
Violation Description:	Failure of the UST system to be designed and constructed with a monitoring system capable of detecting the entry of the hazardous substance into the secondary containment.
Violation Notes:	Returned to compliance on 05/15/2018. OBSERVATION: PREMIUM AND REGULAR SPILL BUCKETS FAILED WHEN TESTED USING VACUUM FOR 1-MINUTE AT 30 INCHES WATER COLUMN. CORRECTED. TECHNICIAN REPAIRED/REPLACED O-RING AND DRAIN VALVES OF SPILL BUCKETS, RETESTED, AND PASSED. COMPLIANCE REQUIREMENT: SPILL CONTAINMENT MUST BE MAINTAIN IN GOOD REPAIR.
Violation Division:	San Bernardino County Fire Department

JACK IN THE BOX INC/QUICK STUFF #7730 (Continued) **S113127704**

Violation Program: UST
Violation Source: CERS

Site ID: 105013
Site Name: CHEVRON STN #308294/2002
Violation Date: 05-16-2017
Citation: HSC 6.7 29291(b) - California Health and Safety Code, Chapter 6.7, Section(s) 29291(b)
Violation Description: Failure of the UST system to be designed and constructed with a monitoring system capable of detecting the entry of the hazardous substance into the secondary containment.
Violation Notes: Returned to compliance on 05/16/2017. DIESEL AND 91 FILL SPILL BUCKETS INITIALLY FAILED WHEN TESTED. FAILED SPILL BUCKETS WERE REPLACED AND WITNESSED PASSING UPON RETEST.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 105013
Site Name: CHEVRON STN #308294/2002
Violation Date: 05-15-2018
Citation: 23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665
Violation Description: Failure to comply with one or more of the following: Failure to install or maintain a liquid-tight spill bucket. Have a minimum capacity of five gallons. Have a functional drain valve or other method for the removal of liquid from the spill bucket/spill container. Be resistant to galvanic corrosion.
Violation Notes: Returned to compliance on 05/15/2018. OBSERVATION: PREMIUM AND REGULAR SPILL BUCKETS FAILED WHEN TESTED USING VACUUM FOR 1-MINUTE AT 30 INCHES WATER COLUMN. CORRECTED. TECHNICIAN REPAIRED/REPLACED O-RING AND DRAIN VALVES OF SPILL BUCKETS, RETESTED, AND PASSED. COMPLIANCE REQUIREMENT: SPILL CONTAINMENT MUST BE MAINTAIN IN GOOD REPAIR.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 105013
Site Name: CHEVRON STN #308294/2002
Violation Date: 05-11-2020
Citation: 23 CCR 16 2641(j) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(j)
Violation Description: Failure of the leak detection equipment to be installed, calibrated, operated, and/or maintained properly.
Violation Notes: Returned to compliance on 05/11/2020. CORRECTIVE ACTION: The 208 sensor was replaced and re-tested and passed. No further action reuiqred. This violation has been corrected. OBSERVATION: The 208 sensor in the 91 STP did not shut down the system.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-06-2019
Violations Found: No
Eval Type: Routine done by local agency

JACK IN THE BOX INC/QUICK STUFF #7730 (Continued) **S113127704**

Eval Notes:	UST INSPECTION
Eval Division:	San Bernardino County Fire Department
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-06-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	UST MONITORING CERTIFICATION
Eval Division:	San Bernardino County Fire Department
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-06-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	UST WASTE INSPECTION
Eval Division:	San Bernardino County Fire Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-11-2020
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	UST ANNUAL INSPECTION
Eval Division:	San Bernardino County Fire Department
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-15-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	San Bernardino County Fire Department
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-15-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	San Bernardino County Fire Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-15-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	ANNUAL UST INSPECTION WITH MONITORING CERTIFICATION
Eval Division:	San Bernardino County Fire Department
Eval Program:	UST

JACK IN THE BOX INC/QUICK STUFF #7730 (Continued) **S113127704**

Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-16-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: HAZARDOUS MATERIALS HANDLER INSPECTION - UST ONLY
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-16-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: UST ANNUAL INSPECTION WITH MONITORING SYSTEM CERTIFICATION.
Eval Division: San Bernardino County Fire Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-23-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Annual UST and Monitoring Certification Inspection
Eval Division: San Bernardino County Fire Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-23-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: HAZMAT HANDLER UST
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-29-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: CHEVRON -RIALTO-UST INSPECTION
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-29-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: CHEVRON RIALTO- UST WASTE INSPECTION
Eval Division: San Bernardino County Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection

JACK IN THE BOX INC/QUICK STUFF #7730 (Continued) **S113127704**

Eval Date: 05-29-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: CHEVRON RIALTO- UST MONT CERT
Eval Division: San Bernardino County Fire Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-05-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: HAZ MAT UST ONLY INSPECTION
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-05-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: ANNUAL UST INSPECTION WITH MONITORING SYSTEM CERTIFICATION
Eval Division: San Bernardino County Fire Department
Eval Program: UST
Eval Source: CERS

Enforcement Action:
Site ID: 105013
Site Name: CHEVRON STN #308294/2002
Site Address: 475 S CEDAR AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 05-16-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 105013
Site Name: CHEVRON STN #308294/2002
Site Address: 475 S CEDAR AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 05-29-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 105013
Site Name: CHEVRON STN #308294/2002
Site Address: 475 S CEDAR AVE
Site City: RIALTO

JACK IN THE BOX INC/QUICK STUFF #7730 (Continued) **S113127704**

Site Zip:	92376
Enf Action Date:	06-05-2014
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	San Bernardino County Fire Department
Enf Action Program:	UST
Enf Action Source:	CERS

Coordinates:

Site ID:	105013
Facility Name:	CHEVRON STN #308294/2002
Env Int Type Code:	HWG
Program ID:	10047505
Coord Name:	Not reported
Ref Point Type Desc:	Unknown
Latitude:	34.092743
Longitude:	-117.395935

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	Pedro R Carranza
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	P.O. Box 6004 Attn: HES Permit Desk
Affiliation City:	SAN RAMON
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94583
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Pedro R Carranza
Entity Title:	RETAIL OE/HES SPECIALIST
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON U.S.A. INC.)
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported

JACK IN THE BOX INC/QUICK STUFF #7730 (Continued) **S113127704**

Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	JACK IN THE BOX INC
Entity Title:	Not reported
Affiliation Address:	9330 BALBOA AVE
Affiliation City:	SAN DIEGO
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92123
Affiliation Phone:	(858) 571-2689
Affiliation Type Desc:	UST Permit Applicant
Entity Name:	CHARLES BITTLE - 5/18/2016
Entity Title:	RETAIL HES
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(925) 842-9002
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	JACK IN THE BOX INC
Entity Title:	Not reported
Affiliation Address:	9330 BALBOA AVE
Affiliation City:	SAN DIEGO
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92123
Affiliation Phone:	(858) 571-2689
Affiliation Type Desc:	Environmental Contact
Entity Name:	Chevron Products Company (a Chevron U.S.A. Inc. division)
Entity Title:	Not reported
Affiliation Address:	P.O. Box 6004 Attn: HES Permit Desk
Affiliation City:	SAN RAMON
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94583
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Chevron Products Company (a Chevron U.S.A. Inc. division)
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(909) 875-0432
Affiliation Type Desc:	UST Tank Operator
Entity Name:	CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON U.S.A. INC.)
Entity Title:	Not reported

JACK IN THE BOX INC/QUICK STUFF #7730 (Continued) **S113127704**

Affiliation Address:	P.O. BOX 6004, ATTN: PERMIT DESK
Affiliation City:	SAN RAMON
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94583
Affiliation Phone:	(925) 842-9002
Affiliation Type Desc:	CUPA District
Entity Name:	San Bernardino County Fire
Entity Title:	Not reported
Affiliation Address:	620 South E Street
Affiliation City:	San Bernardino
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92415-0153
Affiliation Phone:	(909) 386-8401
Affiliation Type Desc:	Legal Owner
Entity Name:	Chevron Products Company (a Chevron U.S.A. Inc. division)
Entity Title:	Not reported
Affiliation Address:	P.O. Box 6004 Attn: HES Permit Desk
Affiliation City:	SAN RAMON
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94583-9458
Affiliation Phone:	(925) 842-9002
Affiliation Type Desc:	UST Tank Owner
Entity Name:	CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON U.S.A. INC.)
Entity Title:	Not reported
Affiliation Address:	P.O. BOX 6004, ATTN: PERMIT DESK
Affiliation City:	SAN RAMON
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94583
Affiliation Phone:	(925) 842-9002

HWTS:

Name:	JACK IN THE BOX INC/QUICK STUFF #7730
Address:	475 S CEDAR AVE
Address 2:	Not reported
City,State,Zip:	RIALTO, CA 92376
EPA ID:	CAL000273291
Inactive Date:	06/30/2010
Create Date:	07/17/2003
Last Act Date:	11/22/2010
Mailing Name:	Not reported
Mailing Address:	2496 TECHNOLOGY DR
Mailing Address 2:	Not reported
Mailing City,State,Zip:	ELGIN, IL 601247925
Owner Name:	JACK IN THE BOX INC
Owner Address:	9330 BALBOA AVE
Owner Address 2:	Not reported
Owner City,State,Zip:	SAN DIEGO, CA 921230000
Contact Name:	DAN ERICKSON PROGRAM MANAGER
Contact Address:	2496 TECHNOLOGY DR

JACK IN THE BOX INC/QUICK STUFF #7730 (Continued) **S113127704**

Contact Address 2: Not reported
City,State,Zip: ELGIN, IL 601247925

NAICS:
EPA ID: CAL000273291
Create Date: 2003-07-17 08:58:31.583
NAICS Code: 44719
NAICS Description: Other Gasoline Stations
Issued EPA ID Date: 2003-07-17 08:58:31.53700
Inactive Date: 2010-06-30 00:00:00
Facility Name: JACK IN THE BOX INC/QUICK STUFF #7730
Facility Address: 475 S CEDAR AVE
Facility Address 2: Not reported
Facility City: RIALTO
Facility County: Not reported
Facility State: CA
Facility Zip: 92376

E16 **DONALD C HUBBS, INC** **SWEEPS UST** **S101591168**
NE **150 S LARCH** **CA FID UST** **N/A**
< 1/8 **RIALTO, CA 92376**
0.119 mi.
628 ft. **Site 1 of 5 in cluster E**

Relative:
Higher

Actual:
1239 ft.

SWEEPS UST:
Name: DONALD C HUBBS, INC
Address: 150 S LARCH
City: RIALTO
Status: Not reported
Comp Number: 2936
Number: Not reported
Board Of Equalization: 44-019859
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-002936-000001
Tank Status: Not reported
Capacity: 5000
Active Date: Not reported
Tank Use: UNKNOWN
STG: PRODUCT
Content: UNKNOWN
Number Of Tanks: 6

Name: DONALD C HUBBS, INC
Address: 150 S LARCH
City: RIALTO
Status: Not reported
Comp Number: 2936
Number: Not reported
Board Of Equalization: 44-019859
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-002936-000002

DONALD C HUBBS, INC (Continued) **S101591168**

Tank Status: Not reported
Capacity: 10000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: REG UNLEADED
Number Of Tanks: Not reported

Name: DONALD C HUBBS, INC
Address: 150 S LARCH
City: RIALTO
Status: Not reported
Comp Number: 2936
Number: Not reported
Board Of Equalization: 44-019859
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-002936-000003
Tank Status: Not reported
Capacity: 10000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: DIESEL
Number Of Tanks: Not reported

Name: DONALD C HUBBS, INC
Address: 150 S LARCH
City: RIALTO
Status: Not reported
Comp Number: 2936
Number: Not reported
Board Of Equalization: 44-019859
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-002936-000004
Tank Status: Not reported
Capacity: 10000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: DIESEL
Number Of Tanks: Not reported

Name: DONALD C HUBBS, INC
Address: 150 S LARCH
City: RIALTO
Status: Not reported
Comp Number: 2936
Number: Not reported
Board Of Equalization: 44-019859
Referral Date: Not reported
Action Date: Not reported

DONALD C HUBBS, INC (Continued) **S101591168**

Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-002936-000005
Tank Status: Not reported
Capacity: 7500
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: DIESEL
Number Of Tanks: Not reported

Name: DONALD C HUBBS, INC
Address: 150 S LARCH
City: RIALTO
Status: Not reported
Comp Number: 2936
Number: Not reported
Board Of Equalization: 44-019859
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-002936-000006
Tank Status: Not reported
Capacity: 5000
Active Date: Not reported
Tank Use: UNKNOWN
STG: PRODUCT
Content: UNKNOWN
Number Of Tanks: Not reported

CA FID UST:
Facility ID: 36002085
Regulated By: UTNKI
Regulated ID: 00002936
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: Not reported
Mail To: Not reported
Mailing Address: P.O. BOX 490
Mailing Address 2: Not reported
Mailing City,St,Zip: RIALTO 92376
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Inactive

E17
NE
< 1/8
0.119 mi.
628 ft.

Relative: Higher

Actual: 1239 ft.

SSI EXPRESS INC
150 S LARCH AVE
RIALTO, CA 92376

Site 2 of 5 in cluster E

HAZNET **S104567402**
NPDES **N/A**
San Bern. Co. Permit
CIWQS
CERS
HWTS

HAZNET:

Name:	SSI EXPRESS TRANSPORT INC.
Address:	150 S LARCH AVE
Address 2:	Not reported
City,State,Zip:	RIALTO, CA 923769003
Contact:	TIM HORN
Telephone:	9098743072
Mailing Name:	Not reported
Mailing Address:	150 S LARCH AVE
Year:	2019
Gepaid:	CAL000330206
TSD EPA ID:	AZR000520304
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.05000
Year:	2017
Gepaid:	CAL000330206
TSD EPA ID:	AZR000501510
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.05

Additional Info:

Year:	2017
Gen EPA ID:	CAL000330206
Shipment Date:	20170725
Creation Date:	8/3/2018 18:30:14
Receipt Date:	20170805
Manifest ID:	016811370JJK
Trans EPA ID:	CAL000280876
Trans Name:	ACTION WASTE OIL SERVICES
Trans 2 EPA ID:	CAD980585293
Trans 2 Name:	INDUSTRIAL WASTE UTILIZATION
TSDF EPA ID:	AZR000501510
Trans Name:	AA SYDCOL LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported

SSI EXPRESS INC (Continued) **S104567402**

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

NPDES:

Name:	SSI EXPRESS INC
Address:	150 S LARCH AVE
City,State,Zip:	RIALTO, CA 92376
Facility Status:	Not reported
NPDES Number:	Not reported
Region:	Not reported
Agency Number:	Not reported
Regulatory Measure ID:	Not reported
Place ID:	Not reported
Order Number:	Not reported
WDID:	8 36NEC000816
Regulatory Measure Type:	Industrial
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	Not reported
Discharge Name:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Status:	Active
Status Date:	09/30/2015
Operator Name:	SSI Express Inc
Operator Address:	150 S Larch Ave
Operator City:	Rialto
Operator State:	California
Operator Zip:	92376

NPDES as of 03/2018:

NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	8
Regulatory Measure ID:	401215
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	8 36NEC000816
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	09/30/2015
Processed Date:	12/10/2009

SSI EXPRESS INC (Continued) **S104567402**

Status:	Active
Status Date:	09/30/2015
Place Size:	4.9
Place Size Unit:	Acres
Contact:	Tim Horn
Contact Title:	Foreman
Contact Phone:	909-579-7540
Contact Phone Ext:	Not reported
Contact Email:	tim.ssi@sbcglobal.net
Operator Name:	SSI Express Inc
Operator Address:	150 S Larch Ave
Operator City:	Rialto
Operator State:	California
Operator Zip:	92376
Operator Contact:	Tim Horn
Operator Contact Title:	Safety Manager
Operator Contact Phone:	909-579-7540
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	tim.ssi@sbcglobal.net
Operator Type:	Private Business
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	Santa Ana River
Certifier:	Tim Horn
Certifier Title:	Foreman
Certification Date:	24-AUG-16
Primary Sic:	4231-Terminal and Joint Terminal Maintenance Facilities for Motor Freight Transportation
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	CAS000001

SSI EXPRESS INC (Continued) **S104567402**

Status:	Active
Agency Number:	0
Region:	8
Regulatory Measure ID:	401215
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	8 36NEC000816
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	12/10/2009
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	SSI Express Inc
Discharge Address:	150 S Larch Ave
Discharge City:	Rialto
Discharge State:	California
Discharge Zip:	92376
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported

SSI EXPRESS INC (Continued) **S104567402**

Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

Name:	SSI EXPRESS INC
Address:	150 S LARCH AVE
City,State,Zip:	RIALTO, CA 92376
Facility Status:	Active
NPDES Number:	CAS000001
Region:	8
Agency Number:	0
Regulatory Measure ID:	401215
Place ID:	Not reported
Order Number:	97-03-DWQ
WDID:	8 36NEC000816
Regulatory Measure Type:	Enrollee
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	12/10/2009
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	150 S Larch Ave
Discharge Name:	SSI Express Inc
Discharge City:	Rialto
Discharge State:	California
Discharge Zip:	92376
Status:	Not reported
Status Date:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported

NPDES as of 03/2018:

NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	8
Regulatory Measure ID:	401215
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported

SSI EXPRESS INC (Continued) **S104567402**

WDID:	8 36NEC000816
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	09/30/2015
Processed Date:	12/10/2009
Status:	Active
Status Date:	09/30/2015
Place Size:	4.9
Place Size Unit:	Acres
Contact:	Tim Horn
Contact Title:	Foreman
Contact Phone:	909-579-7540
Contact Phone Ext:	Not reported
Contact Email:	tim.ssi@sbcglobal.net
Operator Name:	SSI Express Inc
Operator Address:	150 S Larch Ave
Operator City:	Rialto
Operator State:	California
Operator Zip:	92376
Operator Contact:	Tim Horn
Operator Contact Title:	Safety Manager
Operator Contact Phone:	909-579-7540
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	tim.ssi@sbcglobal.net
Operator Type:	Private Business
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported

SSI EXPRESS INC (Continued) **S104567402**

Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	Santa Ana River
Certifier:	Tim Horn
Certifier Title:	Foreman
Certification Date:	24-AUG-16
Primary Sic:	4231-Terminal and Joint Terminal Maintenance Facilities for Motor Freight Transportation
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	CAS000001
Status:	Active
Agency Number:	0
Region:	8
Regulatory Measure ID:	401215
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	8 36NEC000816
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	12/10/2009
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	SSI Express Inc
Discharge Address:	150 S Larch Ave
Discharge City:	Rialto
Discharge State:	California
Discharge Zip:	92376
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported

SSI EXPRESS INC (Continued) **S104567402**

Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

San Bern. Co. Permit:

Name:	PREFERRED PALLET
Address:	150 S LARCH AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0005407
Owner:	LAURA GONZALES
Permit Number:	PT0000941
Permit Category:	HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status:	INACTIVE
Expiration Date:	08/31/2004

CIWQS:

Name:	SSI EXPRESS INC
Address:	150 S LARCH AVE
City,State,Zip:	RIALTO, CA 92376
Agency:	SSI Express Inc
Agency Address:	150 S Larch Ave, Rialto, CA 92376
Place/Project Type:	Industrial - Terminal and Joint Terminal Maintenance Facilities for Motor Freight Transportation
SIC/NAICS:	4231
Region:	8
Program:	INDSTW
Regulatory Measure Status:	Active

SSI EXPRESS INC (Continued) **S104567402**

Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	8 36NEC000816
NPDES Number:	CAS000001
Adoption Date:	01/01/1900
Effective Date:	12/10/2009
Termination Date:	01/01/1900
Expiration/Review Date:	01/01/1900
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	1
Violations within 5 years:	0
Latitude:	34.09867
Longitude:	-117.39261

CERS:

Name:	SSI EXPRESS INC
Address:	150 S LARCH AVE
City,State,Zip:	RIALTO, CA 92376
Site ID:	543148
CERS ID:	801107
CERS Description:	Industrial Facility Storm Water

Affiliation:

Affiliation Type Desc:	Owner/Operator
Entity Name:	SSI Express Inc
Entity Title:	Operator
Affiliation Address:	150 S Larch Ave
Affiliation City:	Rialto
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92376
Affiliation Phone:	Not reported

HWTS:

Name:	SSI EXPRESS TRANSPORT, INC.
Address:	150 S LARCH AVE
Address 2:	Not reported
City,State,Zip:	RIALTO, CA 923769003
EPA ID:	CAL000330206
Inactive Date:	06/30/2017
Create Date:	02/28/2008
Last Act Date:	08/25/2020
Mailing Name:	Not reported
Mailing Address:	150 S LARCH AVE
Mailing Address 2:	Not reported
Mailing City,State,Zip:	RIALTO, CA 923769003
Owner Name:	SSI EXPRESS TRANSPORT INC.
Owner Address:	150 S LARCH AVE
Owner Address 2:	Not reported
Owner City,State,Zip:	RIALTO, CA 923769003
Contact Name:	TIM HORN
Contact Address:	150 S LARCH AVE
Contact Address 2:	Not reported

SSI EXPRESS INC (Continued) **S104567402**

City,State,Zip: RIALTO, CA 92376

NAICS:

EPA ID: CAL000330206
Create Date: 2010-11-22 13:00:50.000
NAICS Code: 48849
NAICS Description: Other Support Activities for Road Transportation
Issued EPA ID Date: 2008-02-28 09:18:31.35700
Inactive Date: 2017-06-30 00:00:00
Facility Name: SSI EXPRESS TRANSPORT, INC.
Facility Address: 150 S LARCH AVE
Facility Address 2: Not reported
Facility City: RIALTO
Facility County: Not reported
Facility State: CA
Facility Zip: 923769003

EPA ID: CAL000330206
Create Date: 2008-02-28 09:18:31.870
NAICS Code: 99999
NAICS Description: Not Otherwise Specified
Issued EPA ID Date: 2008-02-28 09:18:31.35700
Inactive Date: 2017-06-30 00:00:00
Facility Name: SSI EXPRESS TRANSPORT, INC.
Facility Address: 150 S LARCH AVE
Facility Address 2: Not reported
Facility City: RIALTO
Facility County: Not reported
Facility State: CA
Facility Zip: 923769003

E18 **JESSE HUBBS AND SONS** **HIST UST** **U001575541**
NE **150 S LARCH** **N/A**
< 1/8 **RIALTO, CA 92376**
0.119 mi.
628 ft. **Site 3 of 5 in cluster E**

Relative: Higher
Actual: 1239 ft.

HIST UST:

Name: JESSE HUBBS AND SONS
Address: 150 S LARCH
City,State,Zip: RIALTO, CA 92376
File Number: 00029DB8
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00029DB8.pdf
Region: STATE
Facility ID: 00000002936
Facility Type: Other
Other Type: CONSTRUCTION
Contact Name: BILL DECKER
Telephone: 7148751161
Owner Name: DONALD C. HUBBS INC., DBA JESS
Owner Address: 150 S. LARCH
Owner City,St,Zip: RIALTO, CA 92376
Total Tanks: 0006

Tank Num: 001
Container Num: 1
Year Installed: 1971

JESSE HUBBS AND SONS (Continued) **U001575541**

Tank Capacity:	00005000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	3/8
Leak Detection:	Visual

Tank Num:	002
Container Num:	2
Year Installed:	1971
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	3/8
Leak Detection:	Visual

Tank Num:	003
Container Num:	3
Year Installed:	1971
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	3/8
Leak Detection:	Visual

Tank Num:	004
Container Num:	4
Year Installed:	1971
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	3/8
Leak Detection:	Visual

Tank Num:	005
Container Num:	5
Year Installed:	1971
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	3/8
Leak Detection:	Visual

Tank Num:	006
Container Num:	6
Year Installed:	1975
Tank Capacity:	00005000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	3/8
Leak Detection:	Visual

Click here for Geo Tracker PDF:

F19 **DAVE'S AUTO BODY** **CERS HAZ WASTE** **S113108132**
South **1224 W MERRILL AVE** **CERS** **N/A**
1/8-1/4 **RIALTO, CA 92376**
0.137 mi.
722 ft. **Site 1 of 10 in cluster F**

Relative:
Lower

Actual:
1213 ft.

CERS HAZ WASTE:
Name: DAVE'S AUTO BODY
Address: 1224 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Site ID: 110305
CERS ID: 10047241
CERS Description: Hazardous Waste Generator

CERS:
Name: DAVE'S AUTO BODY
Address: 1224 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Site ID: 110305
CERS ID: 10047241
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 110305
Site Name: DAVE'S AUTO BODY
Violation Date: 09-12-2019
Citation: Un-Specified
Violation Description: Hazardous Waste Generator Program - Administration/Documentation - General Local Ordinance
Violation Notes: Returned to compliance on 10/21/2019. Expired on 10/31/2018 Corrective Action: Comply by paying all applicable permit fees upon receipt of invoice and submitting all necessary information.
Violation Division: San Bernardino County Fire Department
Violation Program: HW
Violation Source: CERS

Site ID: 110305
Site Name: DAVE'S AUTO BODY
Violation Date: 09-12-2019
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes: Returned to compliance on 10/21/2019. Inactive. EPA ID Number: CAL000213469. Corrective Action: Comply by submitting form 1358 to DTSC.
Violation Division: San Bernardino County Fire Department
Violation Program: HW
Violation Source: CERS

Site ID: 110305
Site Name: DAVE'S AUTO BODY
Violation Date: 05-17-2016
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete, accurate, and up-to-date.
Violation Notes: Returned to compliance on 09/12/2019.

DAVE'S AUTO BODY (Continued) **S113108132**

Violation Division: San Bernardino County Fire Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 110305
Site Name: DAVE'S AUTO BODY
Violation Date: 05-17-2016
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 09/12/2019.
Violation Division: San Bernardino County Fire Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 110305
Site Name: DAVE'S AUTO BODY
Violation Date: 05-17-2016
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Haz Waste Generator Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 05/31/2016. Failure to obtain an EPA ID Number (CCR 66262.12(a))
Violation Division: San Bernardino County Fire Department
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-17-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: HAZARDOUS MATERIALS INSPECTION FOR DAVE'S AUTO BODY
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-17-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: HAZARDOUS WASTE INSPECTION FOR DAVE'S AUTO BODY
Eval Division: San Bernardino County Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-12-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

DAVE'S AUTO BODY (Continued) **S113108132**

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-12-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: HW
Eval Source: CERS

Enforcement Action:
Site ID: 110305
Site Name: DAVE'S AUTO BODY
Site Address: 1224 W MERRILL AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 05-17-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 110305
Site Name: DAVE'S AUTO BODY
Site Address: 1224 W MERRILL AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 05-17-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 110305
Site Name: DAVE'S AUTO BODY
Site Address: 1224 W MERRILL AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 08-10-2017
Enf Action Type: AEO - Unified Program
Enf Action Description: Administrative Enforcement Order Based on the Unified Program Statute
Enf Action Notes: Fines/Penalties Assessed: $500.00. FACILITY FAILED TO ELECTRONICALLY SUBMIT / UPDATE BUSINESS PLAN INFORMATION ANNUALLY USING THE STATEWIDE INFORMATION MANAGEMENT SYSTEM.
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Coordinates:
Site ID: 110305
Facility Name: DAVE'S AUTO BODY
Env Int Type Code: HMBP
Program ID: 10047241

DAVE'S AUTO BODY (Continued) **S113108132**

Coord Name: Not reported
Ref Point Type Desc: Unknown
Latitude: 34.092293
Longitude: -117.395092

Affiliation:
Affiliation Type Desc: Document Preparer
Entity Name: pilar cruz
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: DAVID CRUZ
Entity Title: Not reported
Affiliation Address: 16022 aliso dr
Affiliation City: FONTANA
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92337
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 1224 WEST MERRILL AVE
Affiliation City: RIALTO
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92376
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: David cruz
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (909) 697-0272

Affiliation Type Desc: Parent Corporation
Entity Name: DAVE'S AUTO BODY
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner

DAVE'S AUTO BODY (Continued) **S113108132**

Entity Name:	CRUZ, DAVID G. & PILAR A.
Entity Title:	Not reported
Affiliation Address:	16022 Aliso dr
Affiliation City:	fontana
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92337
Affiliation Phone:	(909) 820-6664
Affiliation Type Desc:	CUPA District
Entity Name:	San Bernardino County Fire
Entity Title:	Not reported
Affiliation Address:	620 South E Street
Affiliation City:	San Bernardino
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92415-0153
Affiliation Phone:	(909) 386-8401
Affiliation Type Desc:	Identification Signer
Entity Name:	pilar cruz
Entity Title:	owner
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	Cedar Merrill bussines center
Entity Title:	Not reported
Affiliation Address:	1020 Batavia suite B
Affiliation City:	orange
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92376
Affiliation Phone:	(714) 997-7956

F20 **DAVE'S AUTO BODY** **San Bern. Co. Permit** **S105790493**
South **1224 W MERRILL AVE** **N/A**
1/8-1/4 **RIALTO, CA 92376**
0.137 mi.
722 ft. **Site 2 of 10 in cluster F**

Relative:
Lower

Actual:
1213 ft.

San Bern. Co. Permit:

Name:	DAVE'S AUTO BODY
Address:	1224 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0007629
Owner:	CRUZ, DAVID G. & PILAR A.
Permit Number:	PT0013111
Permit Category:	CONDITIONALLY EXEMPT SM QTY GENERATOR SPECIAL
Facility Status:	ACTIVE
Expiration Date:	10/31/2021

DAVE'S AUTO BODY (Continued) **S105790493**

Name: DAVE'S AUTO BODY
Address: 1224 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0007629
Owner: CRUZ, DAVID G. & PILAR A.
Permit Number: PT0013110
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS
Facility Status: INACTIVE
Expiration Date: 10/31/2018

Name: ELITE AUTO BODY
Address: 1224 W MERRILL
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0002892
Owner: PILAR CRUZ
Permit Number: PT0000861
Permit Category: CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR
Facility Status: INACTIVE
Expiration Date: 04/30/2002

Name: ELITE AUTO BODY
Address: 1224 W MERRILL
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0002892
Owner: PILAR CRUZ
Permit Number: PT0000860
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 04/30/2002

F21 **DAVE'S AUTO BODY** **RCRA NonGen / NLR** **1025866326**
South **1224 W MERRILL AVE** **CAL000213469**
1/8-1/4 **RIALTO, CA 92376**
0.137 mi.
722 ft. **Site 3 of 10 in cluster F**

Relative: **Lower**

Actual: **1213 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:		1999-10-29 00:00:00.0
Handler Name:	DAVE'S AUTO BODY	
Handler Address:		1224 W MERRILL AVE
Handler City,State,Zip:		RIALTO, CA 92376-9103
EPA ID:		CAL000213469
Contact Name:		PILARCRUZ NATANZI
Contact Address:		16022 ALISO DR
Contact City,State,Zip:		FONTANA, CA 92337
Contact Telephone:		909-379-8519
Contact Fax:		909-820-6432
Contact Email:		DAVEAAUTOBODY_10@HOTMAIL.COM
Contact Title:		Not reported
EPA Region:		09
Land Type:		Not reported
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported

DAVE'S AUTO BODY (Continued) **1025866326**

Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	1224 W MERRILL AVE
Mailing City,State,Zip:	RIALTO, CA 92376-0000
Owner Name:	DAVID CRUZ
Owner Type:	Other
Operator Name:	PILARCRUZ NATANZI
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2019-10-04 16:30:56.0

DAVE'S AUTO BODY (Continued) **1025866326**

Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	PILARCRUZ NATANZI
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	16022 ALISO DR
Owner/Operator City,State,Zip:	FONTANA, CA 92337
Owner/Operator Telephone:	909-379-8519
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	DAVID CRUZ
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	16022 ALISO DR
Owner/Operator City,State,Zip:	FONTANA, CA 92376-0000
Owner/Operator Telephone:	909-697-0272
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	1999-10-29 00:00:00.0
Handler Name: DAVE'S AUTO BODY	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	Not reported
Recognized Trader Exporter:	Not reported
Spent Lead Acid Battery Importer:	Not reported
Spent Lead Acid Battery Exporter:	Not reported
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found

DAVE'S AUTO BODY (Continued) **1025866326**

Evaluation Action Summary:
Evaluations: No Evaluations Found

F22 **LOPEZ AUTO ELECTRICAL REPAIR** **San Bern. Co. Permit** **S104767858**
South **1220 W MERRILL AVE** **N/A**
1/8-1/4 **RIALTO, CA 92376**
0.137 mi.
722 ft. **Site 4 of 10 in cluster F**

Relative:
Lower

Actual:
1213 ft.

San Bern. Co. Permit:
Name: LOPEZ AUTO ELECTRICAL REPAIR
Address: 1220 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0004478
Owner: SALVADOR LOPEZ
Permit Number: PT0000666
Permit Category: CONDITIONALLY EXEMPT SM QTY GENERATOR SPECIAL
Facility Status: ACTIVE
Expiration Date: 10/31/2021

Name: LOPEZ AUTO ELECTRICAL REPAIR
Address: 1220 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0004478
Owner: SALVADOR LOPEZ
Permit Number: PT0000667
Permit Category: SPECIAL HANDLER
Facility Status: INACTIVE
Expiration Date: 10/31/2010

F23 **LOPEZ AUTO ELECTRICAL REPAIR** **CERS HAZ WASTE** **S113124181**
South **1220 W MERRILL AVE** **HAZNET** **N/A**
1/8-1/4 **RIALTO, CA 92376** **CERS**
0.137 mi. **HWTS**
722 ft. **Site 5 of 10 in cluster F**

Relative:
Lower

Actual:
1213 ft.

CERS HAZ WASTE:
Name: LOPEZ AUTO ELECTRICAL REPAIR
Address: 1220 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Site ID: 131302
CERS ID: 10041562
CERS Description: Hazardous Waste Generator

HAZNET:
Name: LOPEZ AUTO ELECTRICAL REPAIR
Address: 1220 W MERRILL AVE
Address 2: Not reported
City,State,Zip: RIALTO, CA 92376
Contact: SALVADOR LOPEZ
Telephone: 9098206065
Mailing Name: Not reported

LOPEZ AUTO ELECTRICAL REPAIR (Continued) **S113124181**

Mailing Address:	1220 W MERRILL AVE
Year:	2013
Gepaid:	CAL000264532
TSD EPA ID:	AZR000501510
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.015
Year:	2005
Gepaid:	CAL000264532
TSD EPA ID:	CAT080013352
CA Waste Code:	214 - Unspecified solvent mixture
Disposal Method:	R01 - Recycler
Tons:	0.198

Additional Info:

Year:	2013
Gen EPA ID:	CAL000264532
Shipment Date:	20130923
Creation Date:	2/18/2014 22:15:06
Receipt Date:	20131003
Manifest ID:	012211793JJK
Trans EPA ID:	CAR000175422
Trans Name:	WORLDWIDE RECOVERY SYSTEMS INC
Trans 2 EPA ID:	CAD980585293
Trans 2 Name:	INDUSTRIAL WASTE UTILIZATION
TSDF EPA ID:	AZR000501510
Trans Name:	AA SYDCOL LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.015
Waste Quantity:	30
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2005
Gen EPA ID:	CAL000264532
Shipment Date:	20050405
Creation Date:	7/21/2005 18:32:26
Receipt Date:	20050423
Manifest ID:	24183777
Trans EPA ID:	CAL921764910

LOPEZ AUTO ELECTRICAL REPAIR (Continued) **S113124181**

Trans Name:	FONTANA ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO/KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.198
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CERS:

Name:	LOPEZ AUTO ELECTRICAL REPAIR
Address:	1220 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Site ID:	131302
CERS ID:	10041562
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	131302
Site Name:	LOPEZ AUTO ELECTRICAL REPAIR
Violation Date:	07-29-2015
Citation:	HSC 6.5 Multiple Sections - California Health and Safety Code, Chapter 6.5, Section(s) Multiple Sections
Violation Description:	Haz Waste Generator Program - Operations/Maintenance - General
Violation Notes:	Returned to compliance on 07/29/2015. Failure to complete hazardous waste labels (CCR 66262.34(f)(3)) 30 gal drum of used oil was missing an accumulation start date
Violation Division:	San Bernardino County Fire Department
Violation Program:	HW
Violation Source:	CERS

Site ID:	131302
Site Name:	LOPEZ AUTO ELECTRICAL REPAIR
Violation Date:	05-02-2018
Citation:	40 CFR 1 262.34(d)(5)(ii) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 262.34(d)(5)(ii)
Violation Description:	Failure to post the following information next to the telephone: (A) The name and telephone number of the emergency coordinator; (B) Location of fire extinguishers and spill control material, and, if present, fire alarm; and (C) The telephone number of the fire department, unless the facility has a direct alarm.
Violation Notes:	Failure to maintain this information on the "CERS" electronic database, and failure to post this information.
Violation Division:	San Bernardino County Fire Department
Violation Program:	HW
Violation Source:	CERS

LOPEZ AUTO ELECTRICAL REPAIR (Continued) **S113124181**

Site ID:	131302
Site Name:	LOPEZ AUTO ELECTRICAL REPAIR
Violation Date:	05-02-2018
Citation:	40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.173
Violation Description:	Failure to meet the following container management requirements: (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. (b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.
Violation Notes:	Returned to compliance on 05/19/2018. Failure to maintain the used oil container in a closed condition; bunghole is not maintained in a sealed condition. Received a photograph by email on 5/19/2018 showing that the containers are being maintained in a sealed condition. CB
Violation Division:	San Bernardino County Fire Department
Violation Program:	HW
Violation Source:	CERS

Site ID:	131302
Site Name:	LOPEZ AUTO ELECTRICAL REPAIR
Violation Date:	07-29-2015
Citation:	HSC 6.5 Multiple Sections - California Health and Safety Code, Chapter 6.5, Section(s) Multiple Sections
Violation Description:	Haz Waste Generator Program - Operations/Maintenance - General
Violation Notes:	Returned to compliance on 07/29/2015. Failure to note accumulation start date on labels (CCR 66262.34(f)(2)) 30 gal drum of used oil was missing an accumulation start date
Violation Division:	San Bernardino County Fire Department
Violation Program:	HW
Violation Source:	CERS

Site ID:	131302
Site Name:	LOPEZ AUTO ELECTRICAL REPAIR
Violation Date:	07-29-2015
Citation:	22 CCR 16 66266.130 - California Code of Regulations, Title 22, Chapter 16, Section(s) 66266.130
Violation Description:	Failure to properly handle, manage, label, and recycle used oil and fuel filters.
Violation Notes:	Returned to compliance on 07/29/2015. Drained used oil filter drum was missing an accumulation start date
Violation Division:	San Bernardino County Fire Department
Violation Program:	HW
Violation Source:	CERS

Site ID:	131302
Site Name:	LOPEZ AUTO ELECTRICAL REPAIR
Violation Date:	05-02-2018
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 05/19/2018. Failure to provide an accumulation start date and other required identification information

LOPEZ AUTO ELECTRICAL REPAIR (Continued) **S113124181**

on the used oil storage container; the hazardous waste label is no longer legible. Received a photograph by email on 5/19/2018 showing that the containers are being maintained in a sealed condition. CB

Violation Division: San Bernardino County Fire Department
Violation Program: HW
Violation Source: CERS

Site ID: 131302
Site Name: LOPEZ AUTO ELECTRICAL REPAIR
Violation Date: 05-02-2018
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes: Failure to maintain a valid hazardous waste generator ID number; the facility ID number is currently inactive.
Violation Division: San Bernardino County Fire Department
Violation Program: HW
Violation Source: CERS

Site ID: 131302
Site Name: LOPEZ AUTO ELECTRICAL REPAIR
Violation Date: 07-29-2015
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete, accurate, and up-to-date.
Violation Notes: Returned to compliance on 08/03/2015. Facility did not update their Business Plan to CERS.
Violation Division: San Bernardino County Fire Department
Violation Program: HW
Violation Source: CERS

Site ID: 131302
Site Name: LOPEZ AUTO ELECTRICAL REPAIR
Violation Date: 07-29-2015
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 08/03/2015. Facility did not submit their Business Plan to CERS.
Violation Division: San Bernardino County Fire Department
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-02-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: HW
Eval Source: CERS

LOPEZ AUTO ELECTRICAL REPAIR (Continued) **S113124181**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-29-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	ROUTINE GENERATOR INSPECTION
Eval Division:	San Bernardino County Fire Department
Eval Program:	HW
Eval Source:	CERS

Enforcement Action:

Site ID:	131302
Site Name:	LOPEZ AUTO ELECTRICAL REPAIR
Site Address:	1220 W MERRILL AVE
Site City:	RIALTO
Site Zip:	92376
Enf Action Date:	07-29-2015
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	San Bernardino County Fire Department
Enf Action Program:	HW
Enf Action Source:	CERS

Coordinates:

Site ID:	131302
Facility Name:	LOPEZ AUTO ELECTRICAL REPAIR
Env Int Type Code:	HWG
Program ID:	10041562
Coord Name:	Not reported
Ref Point Type Desc:	Unknown
Latitude:	34.092293
Longitude:	-117.395024

Affiliation:

Affiliation Type Desc:	Identification Signer
Entity Name:	SALVADOR LOPEZ
Entity Title:	OWNER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	SALVADOR & FRANCISCO LOPEZ
Entity Title:	Not reported
Affiliation Address:	534 W ROSEWOOD ST
Affiliation City:	RIALTO
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92376
Affiliation Phone:	(909) 820-2179

Affiliation Type Desc:	Document Preparer
Entity Name:	SALVADOR LOPEZ

LOPEZ AUTO ELECTRICAL REPAIR (Continued) **S113124181**

Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	1220 W MERRILL AVE
Affiliation City:	RIALTO
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92376
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	San Bernardino County Fire
Entity Title:	Not reported
Affiliation Address:	620 South E Street
Affiliation City:	San Bernardino
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92415-0153
Affiliation Phone:	(909) 386-8401
Affiliation Type Desc:	Operator
Entity Name:	SALVADOR LOPEZ
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(909) 820-6065
Affiliation Type Desc:	Parent Corporation
Entity Name:	LOPEZ AUTO ELECTRICAL REPAIR
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	FRANCISCO LOPEZ
Entity Title:	Not reported
Affiliation Address:	1220 W MERRILL AVE
Affiliation City:	RIALTO
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92376
Affiliation Phone:	Not reported

LOPEZ AUTO ELECTRICAL REPAIR (Continued) **S113124181**

HWTS:

Name:	LOPEZ AUTO ELECTRICAL REPAIR
Address:	1220 W MERRILL AVE
Address 2:	Not reported
City,State,Zip:	RIALTO, CA 92376
EPA ID:	CAL000264532
Inactive Date:	06/30/2015
Create Date:	01/08/2003
Last Act Date:	01/27/2016
Mailing Name:	Not reported
Mailing Address:	1220 W MERRILL AVE
Mailing Address 2:	Not reported
Mailing City,State,Zip:	RIALTO, CA 923760000
Owner Name:	LOPEZ AUTO ELECTRICAL
Owner Address:	1220 W MERRILL AVE
Owner Address 2:	Not reported
Owner City,State,Zip:	RIALTO, CA 923760000
Contact Name:	SALVADOR LOPEZ
Contact Address:	1220 W MERRILL AVE
Contact Address 2:	Not reported
City,State,Zip:	RIALTO, CA 923760000

NAICS:

EPA ID:	CAL000264532
Create Date:	2003-01-08 08:38:50.030
NAICS Code:	811111
NAICS Description:	General Automotive Repair
Issued EPA ID Date:	2003-01-08 08:38:49.98300
Inactive Date:	2015-06-30 00:00:00
Facility Name:	LOPEZ AUTO ELECTRICAL REPAIR
Facility Address:	1220 W MERRILL AVE
Facility Address 2:	Not reported
Facility City:	RIALTO
Facility County:	Not reported
Facility State:	CA
Facility Zip:	92376

F24 **COSMOS AUTO SALES** **San Bern. Co. Permit** **S104765544**
SSE **1212 W MERRILL AVE** **N/A**
1/8-1/4 **RIALTO, CA 92376**
0.137 mi.
723 ft. **Site 6 of 10 in cluster F**

Relative:
Lower

Actual:
1213 ft.

San Bern. Co. Permit:

Name:	COSMOS AUTO SALES
Address:	1212 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0002510
Owner:	COSMOS MALDONADO
Permit Number:	PT0000609
Permit Category:	HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status:	INACTIVE
Expiration Date:	09/30/2008

F25 **HERHO GROUP CORP DBA HAN AUTO CONNECTION** **CERS HAZ WASTE** **S108432095**
SSE **1208 W MERRILL AVE** **EMI** **N/A**
1/8-1/4 **RIALTO, CA 92376** **San Bern. Co. Permit**
0.137 mi. **CERS**
723 ft. **Site 7 of 10 in cluster F** **HWTS**

Relative:
Lower

Actual:
1212 ft.

CERS HAZ WASTE:

Name:	HAN AUTO CONNECTION
Address:	1208 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Site ID:	35252
CERS ID:	10312552
CERS Description:	Hazardous Waste Generator

EMI:

Name:	HONDA CONNECTION
Address:	1208 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Year:	2005
County Code:	36
Air Basin:	SC
Facility ID:	140355
Air District Name:	SC
SIC Code:	7532
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.1484
Reactive Organic Gases Tons/Yr:	.14660436
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	.00656
Part. Matter 10 Micrometers and Smllr Tons/Yr:	.0062976

San Bern. Co. Permit:

Name:	HAN AUTO CONNECTION
Address:	1208 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0014059
Owner:	HERHO GROUP CORP
Permit Number:	PT0024710
Permit Category:	CONDITIONALLY EXEMPT SM QTY GENERATOR SPECIAL
Facility Status:	ACTIVE
Expiration Date:	10/31/2021

Name:	HAN AUTO CONNECTION
Address:	1208 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0014059
Owner:	HERHO GROUP CORP
Permit Number:	PT0024709
Permit Category:	HAZMAT HANDLER GENERAL ACT.(NB)
Facility Status:	FEE EXEMPT
Expiration Date:	10/31/2013

HERHO GROUP CORP DBA HAN AUTO CONNECTION (Continued) **S108432095**

CERS:
Name: HONDA CONNECTION
Address: 1208 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376-9103
Site ID: 472791
CERS ID: 110038093924
CERS Description: US EPA Air Emission Inventory System (EIS)

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: HANDOKO HERHO
Entity Title: Not reported
Affiliation Address: 3718 N FERNWOOD AVE
Affiliation City: RIALTO
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: HAN AUTO CONNECTION
Address: 1208 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Site ID: 35252
CERS ID: 10312552
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 35252
Site Name: HAN AUTO CONNECTION
Violation Date: 11-20-2017
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Hazardous Waste Generator Program - Operations/Maintenance - General
Violation Notes: Returned to compliance on 11/29/2017. Failure to note accumulation start date on labels (CCR 66262.34(f)(2)) The hazardous waste label on the 30-gallon container of waste paint lacked an accumulation start date. Compliance documentation was received by email on 11/29/2017. CB
Violation Division: San Bernardino County Fire Department
Violation Program: HW
Violation Source: CERS

Site ID: 35252
Site Name: HAN AUTO CONNECTION
Violation Date: 11-20-2017
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Hazardous Waste Generator Program - Operations/Maintenance - General
Violation Notes: Returned to compliance on 11/29/2017. Failure to complete hazardous waste labels (CCR 66262.34(f)(3)) The hazardous waste label on the 30-gallon container of waste paint lacked an accumulation start date. Compliance documentation was received by email on 11/29/2017. CB
Violation Division: San Bernardino County Fire Department
Violation Program: HW
Violation Source: CERS

Site ID: 35252
Site Name: HAN AUTO CONNECTION

HERHO GROUP CORP DBA HAN AUTO CONNECTION (Continued) **S108432095**

Violation Date:	04-18-2014
Citation:	HSC 6.67 Multiple - California Health and Safety Code, Chapter 6.67, Section(s) Multiple
Violation Description:	Haz Waste Generator Program - Operations/Maintenance - General
Violation Notes:	Returned to compliance on 05/21/2014. Failure to establish a Contingency Plan (CCR 66265.51(a))
Violation Division:	San Bernardino County Fire Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	35252
Site Name:	HAN AUTO CONNECTION
Violation Date:	04-18-2014
Citation:	HSC 6.67 Multiple - California Health and Safety Code, Chapter 6.67, Section(s) Multiple
Violation Description:	Haz Waste Generator Program - Operations/Maintenance - General
Violation Notes:	Returned to compliance on 04/18/2014. Failure to note accumulation start date on labels (CCR 66262.34(f)(2)) CORRECTION WAS MADE DURING THE INSPECTION. CB
Violation Division:	San Bernardino County Fire Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	35252
Site Name:	HAN AUTO CONNECTION
Violation Date:	04-18-2014
Citation:	HSC 6.67 Multiple - California Health and Safety Code, Chapter 6.67, Section(s) Multiple
Violation Description:	Haz Waste Generator Program - Operations/Maintenance - General
Violation Notes:	Returned to compliance on 04/18/2014. Failure to complete hazardous waste labels (CCR 66262.34(f)(3)) CORRECTION WAS MADE DURING THE INSPECTION. CB
Violation Division:	San Bernardino County Fire Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	35252
Site Name:	HAN AUTO CONNECTION
Violation Date:	09-24-2020
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 09/24/2020. OBSERVATION: Observed (1) 30-gallon drum of used oil labeled with a hazardous waste label that is illegible. CORRECTED ON SITE: Mr. Edgar Roque placed a complete hazardous waste label on the (1) 30-gallon drum of used oil at the time of inspection.
Violation Division:	San Bernardino County Fire Department
Violation Program:	HW
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection

HERHO GROUP CORP DBA HAN AUTO CONNECTION (Continued) **S108432095**

Eval Date: 04-18-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: REGULAR INSPECTION.
Eval Division: San Bernardino County Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-24-2020
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-20-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: HW
Eval Source: CERS

Enforcement Action:
Site ID: 35252
Site Name: HAN AUTO CONNECTION
Site Address: 1208 W MERRILL AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 04-18-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: HW
Enf Action Source: CERS

Coordinates:
Site ID: 35252
Facility Name: HAN AUTO CONNECTION
Env Int Type Code: HWG
Program ID: 10312552
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 34.092290
Longitude: -117.394500

Affiliation:
Affiliation Type Desc: Parent Corporation
Entity Name: HAN AUTO CONNECTION
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported

HERHO GROUP CORP DBA HAN AUTO CONNECTION (Continued) **S108432095**

Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 1208 W MERRILL AVE
Affiliation City: RIALTO
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92376
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: HERHO GROUP CORP
Entity Title: Not reported
Affiliation Address: 1208 W MERRILL AVE
Affiliation City: RIALTO
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92376
Affiliation Phone: (909) 875-8988

Affiliation Type Desc: CUPA District
Entity Name: San Bernardino County Fire
Entity Title: Not reported
Affiliation Address: 620 South E Street
Affiliation City: San Bernardino
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92415-0153
Affiliation Phone: (909) 386-8401

Affiliation Type Desc: Environmental Contact
Entity Name: HANDOKO HERHO
Entity Title: Not reported
Affiliation Address: 3718 N. FERNWOOD AVE
Affiliation City: RIALTO
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92377
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: HANDOKO HERHO
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (951) 522-6908

HERHO GROUP CORP DBA HAN AUTO CONNECTION (Continued) **S108432095**

HWTS:

Name:	HERHO GROUP CORP DBA HAN AUTO CONNECTION
Address:	1208 W MERRILL AVE
Address 2:	Not reported
City,State,Zip:	RIALTO, CA 923769103
EPA ID:	CAL000293154
Inactive Date:	Not reported
Create Date:	04/12/2005
Last Act Date:	07/20/2020
Mailing Name:	Not reported
Mailing Address:	1208 W MERRILL AVE
Mailing Address 2:	Not reported
Mailing City,State,Zip:	RIALTO, CA 923769103
Owner Name:	HERHO GROUP CORP
Owner Address:	1208 W MERRILL AVE
Owner Address 2:	Not reported
Owner City,State,Zip:	RIALTO, CA 923769103
Contact Name:	HANDOKO HERHO
Contact Address:	1208 W MERRILL AVE
Contact Address 2:	Not reported
City,State,Zip:	RIALTO, CA 92376

NAICS:

EPA ID:	CAL000293154
Create Date:	2005-04-12 12:31:53.820
NAICS Code:	811121
NAICS Description:	Automotive Body, Paint, and Interior Repair and Maintenance
Issued EPA ID Date:	2005-04-12 12:31:53.77300
Inactive Date:	Not reported
Facility Name:	HERHO GROUP CORP DBA HAN AUTO CONNECTION
Facility Address:	1208 W MERRILL AVE
Facility Address 2:	Not reported
Facility City:	RIALTO
Facility County:	Not reported
Facility State:	CA
Facility Zip:	923769103

F26 **HERNO GROUP CORP DBA HAN AUTO CONNECTION** **RCRA NonGen / NLR** **1024811072**
SSE **1208 W MERRILL AVE** **CAL000293154**
1/8-1/4 **RIALTO, CA 92376**
0.137 mi.
723 ft. **Site 8 of 10 in cluster F**

Relative: **Lower**

Actual: **1212 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:	2005-04-12 00:00:00.0
Handler Name:	HERNO GROUP CORP DBA HAN AUTO CONNECTION
Handler Address:	1208 W MERRILL AVE
Handler City,State,Zip:	RIALTO, CA 92376-9103
EPA ID:	CAL000293154
Contact Name:	HANDOKO HERHO
Contact Address:	1208 W MERRILL AVE
Contact City,State,Zip:	RIALTO, CA 92376
Contact Telephone:	909-875-8988
Contact Fax:	909-875-8988
Contact Email:	HONDACONNECTION@HOTMAIL.COM
Contact Title:	Not reported
EPA Region:	09

HERNO GROUP CORP DBA HAN AUTO CONNECTION (Continued) **1024811072**

Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	1208 W MERRILL AVE
Mailing City,State,Zip:	RIALTO, CA 92376-9103
Owner Name:	HERHO GROUP CORP
Owner Type:	Other
Operator Name:	HANDOKO HERHO
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No

HERNO GROUP CORP DBA HAN AUTO CONNECTION (Continued) **1024811072**

Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-09-05 20:26:34.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	HERHO GROUP CORP
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1208 W MERRILL AVE
Owner/Operator City,State,Zip:	RIALTO, CA 92376-9103
Owner/Operator Telephone:	909-875-8988
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	HANDOKO HERHO
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1208 W MERRILL AVE
Owner/Operator City,State,Zip:	RIALTO, CA 92376
Owner/Operator Telephone:	909-875-8988
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2005-04-12 00:00:00.0
Handler Name:	HERNO GROUP CORP DBA HAN AUTO CONNECTION
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	811121
NAICS Description:	AUTOMOTIVE BODY, PAINT, AND INTERIOR REPAIR AND MAINTENANCE

HERNO GROUP CORP DBA HAN AUTO CONNECTION (Continued) **1024811072**

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

F27 **BOB'S AUTO SERVICE** **RCRA NonGen / NLR** **1025866865**
SSE **1202 W MERRILL AVE** **CAL000275340**
1/8-1/4 **RIALTO, CA 92376**
0.137 mi.
724 ft. **Site 9 of 10 in cluster F**

Relative: **Lower**
Actual: **1212 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:		2003-10-10 00:00:00.0
Handler Name:	BOB'S AUTO SERVICE	
Handler Address:		1202 W MERRILL AVE
Handler City,State,Zip:		RIALTO, CA 92376
EPA ID:		CAL000275340
Contact Name:		GARABET JANGOLIAN/OWNER
Contact Address:		1202 W MERRILL AVE
Contact City,State,Zip:		RIALTO, CA 92376-0000
Contact Telephone:		909-820-9627
Contact Fax:		909-820-1252
Contact Email:		Not reported
Contact Title:		Not reported
EPA Region:		09
Land Type:		Not reported
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities
State District Owner:		Not reported
State District:		Not reported
Mailing Address:		1202 W MERRILL AVE
Mailing City,State,Zip:		RIALTO, CA 92376-0000
Owner Name:		GARABET JANGOLIAN
Owner Type:		Other
Operator Name:		GARABET JANGOLIAN/OWNER
Operator Type:		Other
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		Yes
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		Yes
Universal Waste Destination Facility:		Yes
Federal Universal Waste:		No
Active Site Fed-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site Converter Treatment storage and Disposal Facility:		Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:		Not reported

BOB'S AUTO SERVICE (Continued) **1025866865**

Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2019-06-27 15:49:00.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	GARABET JANGOLIAN/OWNER
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1202 W MERRILL AVE
Owner/Operator City,State,Zip:	RIALTO, CA 92376-0000
Owner/Operator Telephone:	909-820-9627
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	GARABET JANGOLIAN
Legal Status:	Other

BOB'S AUTO SERVICE (Continued) **1025866865**

Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1202 W MERRILL AVE
Owner/Operator City,State,Zip:	RIALTO, CA 92376-0000
Owner/Operator Telephone:	969-820-9627
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2003-10-10 00:00:00.0
Handler Name: BOB'S AUTO SERVICE	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	Not reported
Recognized Trader Exporter:	Not reported
Spent Lead Acid Battery Importer:	Not reported
Spent Lead Acid Battery Exporter:	Not reported
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	811111
NAICS Description:	GENERAL AUTOMOTIVE REPAIR

Facility Has Received Notices of Violations:

Violations:	No Violations Found

Evaluation Action Summary:

Evaluations:	No Evaluations Found

F28 **BOB'S AUTO SERVICE** **CERS HAZ WASTE** **S104764337**
SSE **1202 W MERRILL AVE** **San Bern. Co. Permit** **N/A**
1/8-1/4 **RIALTO, CA 92376** **CERS**
0.137 mi.
724 ft. **Site 10 of 10 in cluster F**

Relative:
Lower

Actual:
1212 ft.

CERS HAZ WASTE:

Name:	BOB'S AUTO SERVICE
Address:	1202 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Site ID:	12898
CERS ID:	10036438
CERS Description:	Hazardous Waste Generator

San Bern. Co. Permit:

Name:	BOB'S AUTO SERVICE
Address:	1202 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0001528
Owner:	GARABET 'GARY' JANGOLIAN

BOB'S AUTO SERVICE (Continued) **S104764337**

Permit Number: PT0000668
Permit Category: CONDITIONALLY EXEMPT SM QTY GENERATOR SPECIAL
Facility Status: ACTIVE
Expiration Date: 10/31/2021

Name: BOB'S AUTO SERVICE
Address: 1202 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0001528
Owner: GARABET 'GARY' JANGOLIAN
Permit Number: PT0000669
Permit Category: HAZMAT HANDLER GENERAL ACT.(NB)
Facility Status: FEE EXEMPT
Expiration Date: 10/31/2015

CERS:
Name: BOB'S AUTO SERVICE
Address: 1202 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Site ID: 12898
CERS ID: 10036438
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 12898
Site Name: BOB'S AUTO SERVICE
Violation Date: 01-24-2019
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes: Returned to compliance on 02/08/2019. OBSERVATION: The generator's EPA ID number is inactive. A hazardous waste generator shall not treat, store, dispose of, transport or offer for transportation, hazardous waste without an active EPA ID number. CORRECTIVE ACTION: Submit documentation to the CUPA demonstrating that you have reactivated the facility's EPA ID number.
Violation Division: San Bernardino County Fire Department
Violation Program: HW
Violation Source: CERS

Site ID: 12898
Site Name: BOB'S AUTO SERVICE
Violation Date: 03-28-2016
Citation: HSC 6.5 Multiple Sections - California Health and Safety Code, Chapter 6.5, Section(s) Multiple Sections
Violation Description: Haz Waste Generator Program - Operations/Maintenance - General
Violation Notes: Returned to compliance on 03/28/2016. Failure to keep hazardous waste containers closed when not in active use (CCR 66265.173(a)) Violation corrected on site.
Violation Division: San Bernardino County Fire Department
Violation Program: HW
Violation Source: CERS

Site ID: 12898

BOB'S AUTO SERVICE (Continued) **S104764337**

Site Name:	BOB'S AUTO SERVICE
Violation Date:	03-28-2016
Citation:	HSC 6.5 Multiple Sections - California Health and Safety Code, Chapter 6.5, Section(s) Multiple Sections
Violation Description:	Haz Waste Generator Program - Operations/Maintenance - General
Violation Notes:	Returned to compliance on 09/28/2016. Failure to establish a Contingency Plan (CCR 66265.51(a))
Violation Division:	San Bernardino County Fire Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	12898
Site Name:	BOB'S AUTO SERVICE
Violation Date:	01-24-2019
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 01/24/2019. OBSERVATION: Observed (1) 55 gallon drum of used oil with an incomplete hazardous waste label. Also observed (1) 55 gallon drum of used coolant and (1) 55 gallon drum of drained used oil filters without a hazardous waste label. CORRECTED ON SITE: Items mentioned above were all properly labeled at the time of inspection.
Violation Division:	San Bernardino County Fire Department
Violation Program:	HW
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-24-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	San Bernardino County Fire Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-28-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Routine inspection
Eval Division:	San Bernardino County Fire Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-31-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	PERMIT STATUS INSPECTION; HAZMAT HANDLER PERMIT IS NO LONGER REQUIRED AND WILL BE INACTIVATED. CB
Eval Division:	San Bernardino County Fire Department

BOB'S AUTO SERVICE (Continued) **S104764337**

Eval Program: HMRRP
Eval Source: CERS

Enforcement Action:
Site ID: 12898
Site Name: BOB'S AUTO SERVICE
Site Address: 1202 W MERRILL AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 03-28-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: HW
Enf Action Source: CERS

Coordinates:
Site ID: 12898
Facility Name: BOB'S AUTO SERVICE
Env Int Type Code: HMBP
Program ID: 10036438
Coord Name: Not reported
Ref Point Type Desc: Unknown
Latitude: 34.092295
Longitude: -117.394382

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 1202 WEST MERRILL AVE
Affiliation City: RIALTO
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92376
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: GARABET 'GARY' JANGOLIAN
Entity Title: Not reported
Affiliation Address: 1202 W MERRILL AVE
Affiliation City: RIALTO
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92376
Affiliation Phone: (909) 820-9627

Affiliation Type Desc: Operator
Entity Name: BOB'S AUTO SERVICE
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported

BOB'S AUTO SERVICE (Continued) **S104764337**

Affiliation Phone:	(909) 820-9627
Affiliation Type Desc:	Environmental Contact
Entity Name:	GARABET JANGOLIAN
Entity Title:	Not reported
Affiliation Address:	1202 W MERRILL AVE
Affiliation City:	RIALTO
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92376
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	GARABET JANGOLIAN
Entity Title:	OWNER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	San Bernardino County Fire
Entity Title:	Not reported
Affiliation Address:	620 South E Street
Affiliation City:	San Bernardino
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92415-0153
Affiliation Phone:	(909) 386-8401
Affiliation Type Desc:	Parent Corporation
Entity Name:	BOB'S AUTO SERVICE
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

29
NNW
1/8-1/4
0.145 mi.
768 ft.

STATE PIPE & SUPPLY INC
183 S CEDAR AVE
RIALTO, CA 92376

RCRA NonGen / NLR **1024822035**
CAL000339246

Relative:
Higher

Actual:
1248 ft.

RCRA NonGen / NLR:

Date Form Received by Agency:		2008-12-22 00:00:00.0
Handler Name:	STATE PIPE & SUPPLY INC	
Handler Address:		183 S CEDAR AVE
Handler City,State,Zip:		RIALTO, CA 92376-9009
EPA ID:		CAL000339246
Contact Name:		GREG EVANS OPERATIONS MGR
Contact Address:		183 S CEDAR AVE
Contact City,State,Zip:		RIALTO, CA 92376

STATE PIPE & SUPPLY INC (Continued) **1024822035**

Contact Telephone:	909-877-9999
Contact Fax:	909-562-0145
Contact Email:	GREGE@STATEPIPE.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	183 S CEDAR AVE
Mailing City,State,Zip:	RIALTO, CA 92376-9011
Owner Name:	STATE PIPE & SUPPLY INC
Owner Type:	Other
Operator Name:	GREG EVANS OPERATIONS MGR
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

STATE PIPE & SUPPLY INC (Continued) **1024822035**

Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-09-05 20:30:57.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	STATE PIPE & SUPPLY INC
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	183 S. CEDAR AVE.
Owner/Operator City,State,Zip:	RIALTO, CA 92376-0111
Owner/Operator Telephone:	909-877-9999
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	GREG EVANS OPERATIONS MGR
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	183 S CEDAR AVE
Owner/Operator City,State,Zip:	RIALTO, CA 92376
Owner/Operator Telephone:	909-877-9999
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2008-12-22 00:00:00.0
Handler Name: STATE PIPE & SUPPLY INC	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported

STATE PIPE & SUPPLY INC (Continued) **1024822035**

Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 323116
NAICS Description: MANIFOLD BUSINESS FORMS PRINTING

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

G30 **VOGEL PROPERTIES, INC.** **San Bern. Co. Permit** **S117566058**
SSW **1314 MERRILL AVE** **N/A**
1/8-1/4 **RIALTO, CA 92376**
0.152 mi.
803 ft. **Site 1 of 2 in cluster G**

Relative:
Lower

Actual:
1217 ft.

San Bern. Co. Permit:
Name: VOGEL PROPERTIES, INC.
Address: 1314 MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0015767
Owner: VOGEL PROPERTIES, INC
Permit Number: PT0034382
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: INACTIVE
Expiration Date: 02/28/2017

G31 **GO GREEN INDUSTRIES INC** **San Bern. Co. Permit** **S111456416**
SSW **1314 W MERRILL AVE** **CIWQS** **N/A**
1/8-1/4 **RIALTO, CA 92376** **CERS**
0.152 mi. **HWTS**
803 ft. **Site 2 of 2 in cluster G**

Relative:
Lower

Actual:
1217 ft.

San Bern. Co. Permit:
Name: SENTURY TIRE USA
Address: 1314 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0016927
Owner: SENTURY TIRE USA
Permit Number: PT0036211
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: ACTIVE
Expiration Date: 08/31/2021

Name: GO GREEN INDUSTRIES INC
Address: 1314 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0014275
Owner: GUZMAN, HUGO

GO GREEN INDUSTRIES INC (Continued) **S111456416**

Permit Number: PT0032241
Permit Category: CONDITIONALLY EXEMPT SM QTY GENERATOR
Facility Status: INACTIVE
Expiration Date: 03/31/2015

Name: GO GREEN INDUSTRIES INC
Address: 1314 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0014275
Owner: GUZMAN, HUGO
Permit Number: PT0025078
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS
Facility Status: INACTIVE
Expiration Date: 03/31/2015

CIWQS:

Name:	GO GREEN INDUSTRIES INC
Address:	1314 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Agency:	Go Green Industries Inc
Agency Address:	1314 W Merrill Ave, Rialto, CA 92376
Place/Project Type:	Industrial - Plastics Products, NEC
SIC/NAICS:	3089
Region:	8
Program:	INDSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	8 36I023555
NPDES Number:	CAS000001
Adoption Date:	01/01/1900
Effective Date:	03/12/2012
Termination Date:	01/27/2015
Expiration/Review Date:	01/01/1900
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	Not reported
Longitude:	Not reported

CERS:

Name:	SENTURY TIRE USA
Address:	1314 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Site ID:	119799
CERS ID:	10312966
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	119799
Site Name:	SENTURY TIRE USA
Violation Date:	01-06-2015
Citation:	HSC 6.95 25507 - California Health and Safety Code, Chapter 6.95,

GO GREEN INDUSTRIES INC (Continued) **S111456416**

Section(s) 25507
Violation Description: Failure to adequately establish and implement a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 01/13/2015. "CERS" ESTABLISHED ON 1/13/2015. CB
Violation Division: San Bernardino County Fire Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 119799
Site Name: SENTURY TIRE USA
Violation Date: 06-30-2016
Citation: HSC 6.95 25507 - California Health and Safety Code, Chapter 6.95, Section(s) 25507
Violation Description: Failure to adequately establish and implement a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 07/26/2016.
Violation Division: San Bernardino County Fire Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 119799
Site Name: SENTURY TIRE USA
Violation Date: 01-06-2015
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 01/29/2015. Failure to obtain a CUPA Hazardous Materials Handler permit (SBCC 23.0602(a)) PERMIT OBTAINED ON 1/29/2015. CB
Violation Division: San Bernardino County Fire Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 119799
Site Name: SENTURY TIRE USA
Violation Date: 06-30-2016
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 07/26/2016. Failure to obtain a CUPA Hazardous Materials Handler permit (SBCC 23.0602(a))
Violation Division: San Bernardino County Fire Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 119799
Site Name: SENTURY TIRE USA
Violation Date: 06-30-2016
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 07/26/2016.

GO GREEN INDUSTRIES INC (Continued) **S111456416**

Violation Division: San Bernardino County Fire Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 119799
Site Name: SENTURY TIRE USA
Violation Date: 09-16-2019
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 09/17/2019. OBSERVATION: Business plan was last submitted via CERS on 8/31/2017. CERS ID#10312966. CORRECTIVE ACTION: Review and certify the facility's business plan and resubmitted a copy via CERS. Submit the certificate of compliance completed to this Department once the business plan has been resubmitted via CERS.
Violation Division: San Bernardino County Fire Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 119799
Site Name: SENTURY TIRE USA
Violation Date: 01-06-2015
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 01/13/2015. "CERS" ESTABLISHED ON 1/13/2015. CB
Violation Division: San Bernardino County Fire Department
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-06-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: NEW FACILITY INSPECTION.
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-30-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: New facility inspection
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-16-2019

GO GREEN INDUSTRIES INC (Continued) **S111456416**

Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Enforcement Action:
Site ID: 119799
Site Name: SENTURY TIRE USA
Site Address: 1314 W MERRILL AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 01-06-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 119799
Site Name: SENTURY TIRE USA
Site Address: 1314 W MERRILL AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 06-30-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Coordinates:
Site ID: 119799
Facility Name: SENTURY TIRE USA
Env Int Type Code: HMBP
Program ID: 10312966
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 34.092950
Longitude: -117.397760

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: DIANA JIN
Entity Title: Not reported
Affiliation Address: 1314 W MERRILL AVE
Affiliation City: RIALTO
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92376
Affiliation Phone: Not reported

Affiliation Type Desc: Document Preparer

GO GREEN INDUSTRIES INC (Continued) **S111456416**

Entity Name:	DIANA JIN
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	SENTURY TIRE USA
Entity Title:	Not reported
Affiliation Address:	1314 W MERRILL AVE
Affiliation City:	RIALTO
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92376
Affiliation Phone:	(909) 877-4117
Affiliation Type Desc:	Parent Corporation
Entity Name:	SENTURY TIRE USA
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	San Bernardino County Fire
Entity Title:	Not reported
Affiliation Address:	620 South E Street
Affiliation City:	San Bernardino
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92415-0153
Affiliation Phone:	(909) 386-8401
Affiliation Type Desc:	Operator
Entity Name:	SENTURY TIRE USA
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(909) 877-4117
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	1314 W MERRILL AVE
Affiliation City:	RIALTO
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92376

GO GREEN INDUSTRIES INC (Continued) **S111456416**

Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: DIANA JIN
Entity Title: OFFICE MANAGER
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

HWTS:
Name: GO GREEN INDUSTRIES INC
Address: 1314 W MERRILL AVE
Address 2: Not reported
City,State,Zip: RIALTO, CA 923769104
EPA ID: CAL000380787
Inactive Date: 06/30/2015
Create Date: 12/06/2012
Last Act Date: 01/27/2016
Mailing Name: Not reported
Mailing Address: 1314 W MERRILL AVE
Mailing Address 2: Not reported
Mailing City,State,Zip: RIALTO, CA 923760000
Owner Name: HUGO GUZMAN
Owner Address: 10774 NUTMEG CIR
Owner Address 2: Not reported
Owner City,State,Zip: FONTANA, CA 923370000
Contact Name: HUGO GUZMAN
Contact Address: 1314 W MERRILL AVE
Contact Address 2: Not reported
City,State,Zip: RIALTO, CA 923760000

NAICS:
EPA ID: CAL000380787
Create Date: 2012-12-06 12:04:16.190
NAICS Code: 99999
NAICS Description: Not Otherwise Specified
Issued EPA ID Date: 2012-12-06 12:04:16.19000
Inactive Date: 2015-06-30 00:00:00
Facility Name: GO GREEN INDUSTRIES INC
Facility Address: 1314 W MERRILL AVE
Facility Address 2: Not reported
Facility City: RIALTO
Facility County: Not reported
Facility State: CA
Facility Zip: 923769104

E32
NE
1/8-1/4
0.163 mi.
861 ft.

BISSELL HOME CARE INC
181 S LARCH ST
RIALTO, CA 92376

Site 4 of 5 in cluster E

San Bern. Co. Permit **S111311491**
CERS **N/A**

Relative:
Higher

Actual:
1242 ft.

San Bern. Co. Permit:

Name:	BISSELL HOME CARE INC
Address:	181 S LARCH ST
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0014010
Owner:	Bissell Homecare
Permit Number:	PT0024613
Permit Category:	HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status:	ACTIVE
Expiration Date:	10/31/2020

Name:	BISSELL HOME CARE INC
Address:	181 S LARCH ST
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0014010
Owner:	Bissell Homecare
Permit Number:	PT0028695
Permit Category:	HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status:	INACTIVE
Expiration Date:	10/31/2015

CERS:

Name:	BISSELL HOME CARE INC
Address:	181 S LARCH ST
City,State,Zip:	RIALTO, CA 92376
Site ID:	12511
CERS ID:	10312441
CERS Description:	Chemical Storage Facilities

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-13-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	BISSELL INSPECTION
Eval Division:	San Bernardino County Fire Department
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-07-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	San Bernardino County Fire Department
Eval Program:	HMRRP
Eval Source:	CERS

Affiliation:

Affiliation Type Desc:	CUPA District
Entity Name:	San Bernardino County Fire

BISSELL HOME CARE INC (Continued) **S111311491**

Entity Title:	Not reported
Affiliation Address:	620 South E Street
Affiliation City:	San Bernardino
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92415-0153
Affiliation Phone:	(909) 386-8401
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	181 S. Larch Avenue
Affiliation City:	Rialto
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92376
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	SHIPPERS WAREHOUSE INC.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	Mark Wallen
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Bissell Homecare
Entity Title:	Not reported
Affiliation Address:	2345 Walker Ave, NW
Affiliation City:	Grand Rapids
Affiliation State:	MI
Affiliation Country:	United States
Affiliation Zip:	49544
Affiliation Phone:	(616) 791-7796
Affiliation Type Desc:	Operator
Entity Name:	Steve Sandoval
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(909) 746-4200

BISSELL HOME CARE INC (Continued) **S111311491**

Affiliation Type Desc:	Environmental Contact
Entity Name:	MARK WALLEN
Entity Title:	Not reported
Affiliation Address:	3953 Grand Lakes Way
Affiliation City:	Grand Prairie
Affiliation State:	TX
Affiliation Country:	Not reported
Affiliation Zip:	75050
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Mark Wallen
Entity Title:	Corporate Quality and Compliance Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

E33 **FLEETWOOD TRAVEL TRAILERS 15** **HIST UST** **1000224100**
NE **145 SOUTH LARCH AVE** **RCRA NonGen / NLR** **CAD981384092**
1/8-1/4 **RIALTO, CA 92376** **EMI**
0.164 mi. **WDS**
864 ft. **Site 5 of 5 in cluster E** **CERS**

Relative: Higher

Actual: 1242 ft.

HIST UST:

Name:	FLEETWOOD TRAVEL TRAILERS OF C
Address:	145 S LARCH AVE
City,State,Zip:	RIALTO, CA 92376
File Number:	00029EA1
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00029EA1.pdf
Region:	STATE
Facility ID:	00000018137
Facility Type:	Other
Other Type:	MANUFACTURING
Contact Name:	Not reported
Telephone:	7148742223
Owner Name:	FLEETWOOD ENTERPRISES, INC.
Owner Address:	3125 MAYERS STREET
Owner City,St,Zip:	RIVERSIDE, CA 92523
Total Tanks:	0001

Tank Num:	001
Container Num:	1
Year Installed:	1972
Tank Capacity:	00000550
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor

Click here for Geo Tracker PDF:

RCRA NonGen / NLR:

Date Form Received by Agency:	2008-10-10 00:00:00.0

FLEETWOOD TRAVEL TRAILERS 15 (Continued) **1000224100**

Handler Name:	FLEETWOOD TRAVEL TRAILERS 15
Handler Address:	145 SOUTH LARCH AVE
Handler City,State,Zip:	RIALTO, CA 92376
EPA ID:	CAD981384092
Contact Name:	MAUREEN SCWITZER
Contact Address:	3125 MYERS ST
Contact City,State,Zip:	RIVERSIDE, CA 92513
Contact Telephone:	951-351-3612
Contact Fax:	Not reported
Contact Email:	MAUREEN.SCHWITZER@FLEETWOOD.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Private
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	3125 MYERS ST
Mailing City,State,Zip:	RIVERSIDE, CA 92513
Owner Name:	NOT REQUIRED
Owner Type:	Private
Operator Name:	NOT REQUIRED
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No

FLEETWOOD TRAVEL TRAILERS 15 (Continued) **1000224100**

Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2008-10-21 15:00:23.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	Not reported

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	NOT REQUIRED
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	NOT REQUIRED
Owner/Operator City,State,Zip:	NOT REQUIRED, ME 99999
Owner/Operator Telephone:	415-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	NOT REQUIRED
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	NOT REQUIRED
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	NOT REQUIRED

FLEETWOOD TRAVEL TRAILERS 15 (Continued) **1000224100**

Owner/Operator City,State,Zip: NOT REQUIRED, ME 99999
Owner/Operator Telephone: 415-555-1212
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: FLEETWOOD ENTERPRISES
Legal Status: Private
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: NOT REQUIRED
Owner/Operator City,State,Zip: NOT REQUIRED, ME 99999
Owner/Operator Telephone: 415-555-1212
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 1996-09-01 00:00:00.0
Handler Name: FLEETWOOD TRAVEL TRAILERS 15
Federal Waste Generator Description: Small Quantity Generator
State District Owner: CA
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1986-02-06 00:00:00.0
Handler Name: FLEETWOOD TRAVEL TRAILERS 15
Federal Waste Generator Description: Large Quantity Generator
State District Owner: CA
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2008-10-10 00:00:00.0
Handler Name: FLEETWOOD TRAVEL TRAILERS 15
Federal Waste Generator Description: Not a generator, verified
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

FLEETWOOD TRAVEL TRAILERS 15 (Continued) **1000224100**

Receive Date: 1994-03-25 00:00:00.0
Handler Name: FLEETWOOD TRAVEL TRAILERS OF CA, INC.
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1996-02-07 00:00:00.0
Handler Name: FLEETWOOD TRAVEL TRAILERS OF CA
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 336214
NAICS Description: TRAVEL TRAILER AND CAMPER MANUFACTURING

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

EMI:
Name: PROWLER IND
Address: 145 S LARCH AV
City,State,Zip: RIALTO, CA 92376
Year: 1987
County Code: 36
Air Basin: SC
Facility ID: 12280
Air District Name: SC
SIC Code: 3711
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 16
Reactive Organic Gases Tons/Yr: 15
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0

FLEETWOOD TRAVEL TRAILERS 15 (Continued) **1000224100**

Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: FLEETWOOD TRAVEL TRAILERS OF C
Address: 145 S LARCH AV
City,State,Zip: RIALTO, CA 92376
Year: 1987
County Code: 36
Air Basin: SC
Facility ID: 45306
Air District Name: SC
SIC Code: 3799
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 14
Reactive Organic Gases Tons/Yr: 10
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: FLEETWOOD TRAVEL TRAILERS OF C
Address: 145 S LARCH AV
City,State,Zip: RIALTO, CA 92376
Year: 1990
County Code: 36
Air Basin: SC
Facility ID: 12280
Air District Name: SC
SIC Code: 3792
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 19
Reactive Organic Gases Tons/Yr: 17
Carbon Monoxide Emissions Tons/Yr: 1
NOX - Oxides of Nitrogen Tons/Yr: 1
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: FLEETWOOD TRAVEL TRAILERS OF C
Address: 145 S LARCH AV
City,State,Zip: RIALTO, CA 92376
Year: 1993
County Code: 36
Air Basin: SC
Facility ID: 12280
Air District Name: SC
SIC Code: 3792
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 25
Reactive Organic Gases Tons/Yr: 10

FLEETWOOD TRAVEL TRAILERS 15 (Continued) **1000224100**

Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: FLEETWOOD TRAVEL TRAILERS OF C
Address: 145 S LARCH AV
City,State,Zip: RIALTO, CA 92376
Year: 1995
County Code: 36
Air Basin: SC
Facility ID: 12280
Air District Name: SC
SIC Code: 3792
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 25
Reactive Organic Gases Tons/Yr: 10
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: FLEETWOOD TRAVEL TRAILERS OF C
Address: 145 S LARCH AVE
City,State,Zip: RIALTO, CA 92376
Year: 1996
County Code: 36
Air Basin: SC
Facility ID: 12280
Air District Name: SC
SIC Code: 3792
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 10
Reactive Organic Gases Tons/Yr: 8
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: FLEETWOOD TRAVEL TRAILERS OF CAL INC #15
Address: 145 S LARCH AVE
City,State,Zip: RIALTO, CA 92376
Year: 2002
County Code: 36
Air Basin: SC
Facility ID: 12280
Air District Name: SC
SIC Code: 3792
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported

FLEETWOOD TRAVEL TRAILERS 15 (Continued) **1000224100**

Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 13
Reactive Organic Gases Tons/Yr: 11
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: FLEETWOOD TRAVEL TRAILERS OF CAL INC #15
Address: 145 S LARCH AVE
City,State,Zip: RIALTO, CA 92376
Year: 2003
County Code: 36
Air Basin: SC
Facility ID: 12280
Air District Name: SC
SIC Code: 3792
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 13
Reactive Organic Gases Tons/Yr: 11
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: FLEETWOOD TRAVEL TRAILERS OF CAL INC #15
Address: 145 S LARCH AVE
City,State,Zip: RIALTO, CA 92376
Year: 2004
County Code: 36
Air Basin: SC
Facility ID: 12280
Air District Name: SC
SIC Code: 3792
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 12.796405
Reactive Organic Gases Tons/Yr: 11.03
Carbon Monoxide Emissions Tons/Yr: 0.00945
NOX - Oxides of Nitrogen Tons/Yr: 0.0351
SOX - Oxides of Sulphur Tons/Yr: 0.000224
Particulate Matter Tons/Yr: 0.00203
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: FLEETWOOD TRAVEL TRAILERS OF CAL INC #15
Address: 145 S LARCH AVE
City,State,Zip: RIALTO, CA 92376
Year: 2005
County Code: 36
Air Basin: SC
Facility ID: 12280
Air District Name: SC

FLEETWOOD TRAVEL TRAILERS 15 (Continued) **1000224100**

SIC Code: 3792
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 13.347615
Reactive Organic Gases Tons/Yr: 11.458321967
Carbon Monoxide Emissions Tons/Yr: .00543
NOX - Oxides of Nitrogen Tons/Yr: .0202
SOX - Oxides of Sulphur Tons/Yr: .00009
Particulate Matter Tons/Yr: .00116
Part. Matter 10 Micrometers and Smllr Tons/Yr: .001102

Name: FLEETWOOD TRAVEL TRAILERS OF CAL INC #15
Address: 145 S LARCH AVE
City,State,Zip: RIALTO, CA 92376
Year: 2006
County Code: 36
Air Basin: SC
Facility ID: 12280
Air District Name: SC
SIC Code: 3792
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 10.40258966362743629
Reactive Organic Gases Tons/Yr: 8.519
Carbon Monoxide Emissions Tons/Yr: .005
NOX - Oxides of Nitrogen Tons/Yr: .017
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: .001
Part. Matter 10 Micrometers and Smllr Tons/Yr: .00095

Name: FLEETWOOD TRAVEL TRAILERS OF CAL INC #15
Address: 145 S LARCH AVE
City,State,Zip: RIALTO, CA 92376
Year: 2007
County Code: 36
Air Basin: SC
Facility ID: 12280
Air District Name: SC
SIC Code: 3792
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 10.40258966362743629
Reactive Organic Gases Tons/Yr: 8.519
Carbon Monoxide Emissions Tons/Yr: .005
NOX - Oxides of Nitrogen Tons/Yr: .017
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: .001
Part. Matter 10 Micrometers and Smllr Tons/Yr: .00095

WDS:
Name: FLEETWOOD TRAVEL TRAILERS CA
Address: 145 S LARCH AVE
City: RIALTO
Facility ID: Santa Ana River 36I015298

FLEETWOOD TRAVEL TRAILERS 15 (Continued) **1000224100**

Facility Type:	Other - Does not fall into the category of Municipal/Domestic, Industrial, Agricultural or Solid Waste (Class I, II or III)
Facility Status:	Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number:	CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion:	8
Facility Telephone:	9098742223
Facility Contact:	DAVE PARTLOW
Agency Name:	FLEETWOOD TRAVEL TRAILERS CA
Agency Address:	PO BOX 810
Agency City,St,Zip:	RIALTO 92376
Agency Contact:	DAVE PARTLOW
Agency Telephone:	9098742223
Agency Type:	Private
SIC Code:	0
SIC Code 2:	Not reported
Primary Waste Type:	Not reported
Primary Waste:	Not reported
Waste Type2:	Not reported
Waste2:	Not reported
Primary Waste Type:	Not reported
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Design Flow:	0
Baseline Flow:	0
Reclamation:	Not reported
POTW:	Not reported
Treat To Water:	Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity:	Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

CERS:

Name:	FLEETWOOD TRAVEL TRAILERS OF C
Address:	145 S. LARCH AVE.
City,State,Zip:	RIALTO, CA 92376
Site ID:	468220
CERS ID:	110000770531
CERS Description:	US EPA Air Emission Inventory System (EIS)

Affiliation:

Affiliation Type Desc:	Environmental Contact
Entity Name:	MAUREEN SCWITZER
Entity Title:	Not reported
Affiliation Address:	3125 MYERS ST
Affiliation City:	RIVERSIDE
Affiliation State:	CA
Affiliation Country:	Not reported

FLEETWOOD TRAVEL TRAILERS 15 (Continued) **1000224100**

Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Public Contact
Entity Name: MARK HOWARD
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

34
WSW
1/8-1/4
0.190 mi.
1004 ft.

SOUTHERN CALIFORNIA EDISON- SITE 003 ROOFTOP
1464 W MERRILL AVE
RIALTO, CA 92376

HAZNET
San Bern. Co. Permit
CERS
HWTS

S113663467
N/A

Relative:
Lower

Actual:
1227 ft.

HAZNET:
Name: SOUTHERN CALIFORNIA EDISON- SITE 003 ROOFTOP
Address: 1464 W MERRILL AVE
Address 2: Not reported
City,State,Zip: RIALTO, CA 923769113
Contact: SARA M. DUVALL
Telephone: 6268628458
Mailing Name: Not reported
Mailing Address: PO BOX 800

Year: 2013
Gepaid: CAC002743763
TSD EPA ID: AZ0000337360
CA Waste Code: 181 - Other inorganic solid waste
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 6.5

Additional Info:
Year: 2013
Gen EPA ID: CAC002743763

Shipment Date: 20131009
Creation Date: 2/22/2014 22:15:18
Receipt Date: 20131022
Manifest ID: 000816898VES
Trans EPA ID: NJD080631369
Trans Name: VEOLIA ES TECHNICAL SOLUTIONS
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: AZ0000337360
Trans Name: VEOLIA ES TECHNICAL SOLUTIONS
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 181 - Other inorganic solid waste Organics
RCRA Code: Not reported

SOUTHERN CALIFORNIA EDISON- SITE 003 ROOFTOP (Continued) **S113663467**

Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	6.5
Waste Quantity:	13000
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

San Bern. Co. Permit:

Name:	KUEHNE-NAGEL
Address:	1464 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0014969
Owner:	KUEHNE & NAGEL
Permit Number:	PT0026110
Permit Category:	HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status:	ACTIVE
Expiration Date:	04/30/2021

Name:	KUEHNE-NAGEL
Address:	1464 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0014969
Owner:	KUEHNE & NAGEL
Permit Number:	PT0032834
Permit Category:	CONDITIONALLY EXEMPT SM QTY GENERATOR
Facility Status:	INACTIVE
Expiration Date:	04/30/2015

CERS:

Name:	KUEHNE-NAGEL
Address:	1464 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Site ID:	396032
CERS ID:	10447555
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	396032
Site Name:	Kuehne-Nagel
Violation Date:	05-05-2016
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete, accurate, and up-to-date.
Violation Notes:	Returned to compliance on 05/26/2016. The last Business Plan update submitted by this facility is dated 1/15/2015.
Violation Division:	San Bernardino County Fire Department
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	396032

SOUTHERN CALIFORNIA EDISON- SITE 003 ROOFTOP (Continued) **S113663467**

Site Name: Kuehne-Nagel
Violation Date: 05-05-2016
Citation: HSC 6.95 25508.1(a)-(e) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(e)
Violation Description: Failure to electronically update business plan within 30 days of any one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or business name.
Violation Notes: Returned to compliance on 05/26/2016. Hazardous materials were observed on site during the inspection that are not listed in the most current Business Plan inventory or are listed in lesser quantities. The Site Map must show all hazardous material storage areas. Also, the Facility Information section must be revised as the emergency contacts have changed and the wrong owner name is listed.
Violation Division: San Bernardino County Fire Department
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-05-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: ROUTINE HANDLER INSPECTION-KUEHNE AND NAGEL
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-22-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: ROUTINE HANDLER INSPECTION-KUEHNE NAGEL
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Enforcement Action:
Site ID: 396032
Site Name: Kuehne-Nagel
Site Address: 1464 W MERRILL AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 05-05-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Coordinates:
Site ID: 396032
Facility Name: Kuehne-Nagel

SOUTHERN CALIFORNIA EDISON- SITE 003 ROOFTOP (Continued) **S113663467**

Env Int Type Code:	HMBP
Program ID:	10447555
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	34.094130
Longitude:	-117.399680

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	Melissa J. Salazar
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Environmental Contact
Entity Name:	Norma Betancourt
Entity Title:	Not reported
Affiliation Address:	1464 W. Merrill Ave.
Affiliation City:	Rialto
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92376
Affiliation Phone:	Not reported

Affiliation Type Desc:	CUPA District
Entity Name:	San Bernardino County Fire
Entity Title:	Not reported
Affiliation Address:	620 South E Street
Affiliation City:	San Bernardino
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92415-0153
Affiliation Phone:	(909) 386-8401

Affiliation Type Desc:	Identification Signer
Entity Name:	Bob Egan
Entity Title:	Regional General Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	1464 W. Merrill Ave.
Affiliation City:	Rialto
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92376
Affiliation Phone:	Not reported

SOUTHERN CALIFORNIA EDISON- SITE 003 ROOFTOP (Continued) **S113663467**

Affiliation Type Desc:	Legal Owner
Entity Name:	Kuehne+Nagel Inc.
Entity Title:	Not reported
Affiliation Address:	1464 W. Merrill Ave.
Affiliation City:	Rialto
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92376
Affiliation Phone:	(909) 421-1778

Affiliation Type Desc:	Operator
Entity Name:	CHRISTINA RODRIGUEZ
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(909) 644-4280

Affiliation Type Desc:	Parent Corporation
Entity Name:	Kuehne-Nagel
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Property Owner
Entity Name:	Exeter Property Group
Entity Title:	Not reported
Affiliation Address:	2001 Broadway Ste. 150
Affiliation City:	Oakland
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94612
Affiliation Phone:	(510) 398-9956

HWTS:

Name:	SOUTHERN CALIFORNIA EDISON- SITE 003 ROOFTOP
Address:	1464 W MERRILL AVE
Address 2:	Not reported
City,State,Zip:	RIALTO, CA 923769113
EPA ID:	CAC002743763
Inactive Date:	12/13/2013
Create Date:	09/13/2013
Last Act Date:	06/30/2014
Mailing Name:	Not reported
Mailing Address:	PO BOX 800
Mailing Address 2:	Not reported
Mailing City,State,Zip:	ROSEMEAD, CA 917700000
Owner Name:	SOUTHERN CALIFORNIA EDISON
Owner Address:	PO BOX 800
Owner Address 2:	Not reported

SOUTHERN CALIFORNIA EDISON- SITE 003 ROOFTOP (Continued) **S113663467**

Owner City,State,Zip:	ROSEMEAD, CA 917700000
Contact Name:	SARA M. DUVALL
Contact Address:	P.O. BOX 800
Contact Address 2:	Not reported
City,State,Zip:	ROSEMEAD, CA 91770

NAICS:

EPA ID:	CAC002743763
Create Date:	2013-09-13 08:36:42.847
NAICS Code:	221122
NAICS Description:	Electric Power Distribution
Issued EPA ID Date:	2013-09-13 08:36:42.86300
Inactive Date:	2013-12-13 08:36:00
Facility Name:	SOUTHERN CALIFORNIA EDISON- SITE 003 ROOFTOP
Facility Address:	1464 W MERRILL AVE
Facility Address 2:	Not reported
Facility City:	RIALTO
Facility County:	Not reported
Facility State:	CA
Facility Zip:	923769113

H35 **AMERICAN BUILDING SUPPLY INC** **San Bern. Co. Permit** **S112142766**
NNW **120 S CEDAR AVE** **CERS** **N/A**
1/8-1/4 **RIALTO, CA 92376** **HWTS**
0.202 mi.
1065 ft. **Site 1 of 4 in cluster H**

Relative:
Higher

Actual:
1254 ft.

San Bern. Co. Permit:

Name:	AMERICAN BUILDING SUPPLY INC
Address:	120 S CEDAR AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0014685
Owner:	BALLANTYNE. MARK
Permit Number:	PT0025623
Permit Category:	HAZARDOUS MATERIALS 4-10 CHEMICALS
Facility Status:	ACTIVE
Expiration Date:	12/31/2020

CERS:

Name:	AMERICAN BUILDING SUPPLY INC
Address:	120 S CEDAR AVE
City,State,Zip:	RIALTO, CA 92376
Site ID:	384767
CERS ID:	10313581
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	384767
Site Name:	AMERICAN BUILDING SUPPLY INC
Violation Date:	07-15-2015
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete, accurate, and up-to-date.
Violation Notes:	Returned to compliance on 07/31/2015. "CERS" BUSINESS PLAN UPDATE WAS SUBMITTED ON 7/31/2015. CB

AMERICAN BUILDING SUPPLY INC (Continued) **S112142766**

Violation Division: San Bernardino County Fire Department
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-22-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-15-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: REGULAR INSPECTION.
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Enforcement Action:
Site ID: 384767
Site Name: AMERICAN BUILDING SUPPLY INC
Site Address: 120 S CEDAR AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 07-15-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Coordinates:
Site ID: 384767
Facility Name: AMERICAN BUILDING SUPPLY INC
Env Int Type Code: HMBP
Program ID: 10313581
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 34.099070
Longitude: -117.396610

Affiliation:
Affiliation Type Desc: Identification Signer
Entity Name: Pedro Lopez
Entity Title: Operations Manager
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported

AMERICAN BUILDING SUPPLY INC (Continued) **S112142766**

Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	gary lee
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	BALLANTYNE. MARK
Entity Title:	Not reported
Affiliation Address:	8360 ELDER CREEK RD
Affiliation City:	SACRAMENTO
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95828
Affiliation Phone:	(916) 503-4176
Affiliation Type Desc:	Parent Corporation
Entity Name:	AMERICAN BUILDING SUPPLY INC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	San Bernardino County Fire
Entity Title:	Not reported
Affiliation Address:	620 South E Street
Affiliation City:	San Bernardino
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92415-0153
Affiliation Phone:	(909) 386-8401
Affiliation Type Desc:	Environmental Contact
Entity Name:	PEDRO LOPEZ
Entity Title:	Not reported
Affiliation Address:	120 S CEDAR AVE
Affiliation City:	RIALTO
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92376
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	120 S CEDAR AVE

AMERICAN BUILDING SUPPLY INC (Continued) **S112142766**

Affiliation City:	RIALTO
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92376
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	PEDRO LOPEZ
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(909) 879-8700

HWTS:

Name:	AMERICAN BUILDING SUPPLY INC
Address:	120 S CEDAR AVE
Address 2:	Not reported
City,State,Zip:	RIALTO, CA 92376
EPA ID:	CAL000453407
Inactive Date:	Not reported
Create Date:	03/11/2020
Last Act Date:	08/21/2020
Mailing Name:	DARIN LOWERY
Mailing Address:	8360 ELDER CREEK RD
Mailing Address 2:	Not reported
Mailing City,State,Zip:	SACRAMENTO, CA 95828
Owner Name:	AMERICAN BUILDING SUPPLY INC
Owner Address:	8360 ELDER CREEK RD
Owner Address 2:	Not reported
Owner City,State,Zip:	SACRAMENTO, CA 958281705
Contact Name:	DARIN LOWERY
Contact Address:	8360 ELDER CREEK RD
Contact Address 2:	Not reported
City,State,Zip:	SACRAMENTO, CA 95828

NAICS:

EPA ID:	CAL000453407
Create Date:	2020-03-11 12:35:19.627
NAICS Code:	321918
NAICS Description:	Other Millwork (including Flooring)
Issued EPA ID Date:	2020-03-11 12:35:19.61000
Inactive Date:	Not reported
Facility Name:	AMERICAN BUILDING SUPPLY INC
Facility Address:	120 S CEDAR AVE
Facility Address 2:	Not reported
Facility City:	RIALTO
Facility County:	Not reported
Facility State:	CA
Facility Zip:	92376

H36 **AMERICAN BUILDING SUPPLY INC** **RCRA NonGen / NLR** **1026057214**
NNW **120 S CEDAR AVE** **CAL000453407**
1/8-1/4 **RIALTO, CA 92376**
0.202 mi.
1065 ft. **Site 2 of 4 in cluster H**

Relative: **Higher**

Actual: **1254 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:	2020-03-11 00:00:00.0
Handler Name:	AMERICAN BUILDING SUPPLY INC
Handler Address:	120 S CEDAR AVE
Handler City,State,Zip:	RIALTO, CA 92376
EPA ID:	CAL000453407
Contact Name:	WILLIAM MORGAN
Contact Address:	3250 LAKEPORT BLVD
Contact City,State,Zip:	KLAMATH FALLS, OR 97601
Contact Telephone:	541-827-9678
Contact Fax:	Not reported
Contact Email:	TIM_ALDERMAN@ABS-ABS.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	120 S CEDAR AVE
Mailing City,State,Zip:	RIALTO, CA 92376
Owner Name:	AMERICAN BUILDING SUPPLY INC
Owner Type:	Other
Operator Name:	WILLIAM MORGAN
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported

AMERICAN BUILDING SUPPLY INC (Continued) **1026057214**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2020-03-13 17:51:58.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	WILLIAM MORGAN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	3250 LAKEPORT BLVD
Owner/Operator City,State,Zip:	KLAMATH FALLS, OR 97601
Owner/Operator Telephone:	541-827-9678
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	AMERICAN BUILDING SUPPLY INC
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	120 S CEDAR AVE
Owner/Operator City,State,Zip:	RIALTO, CA 92376
Owner/Operator Telephone:	909-879-8755
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

AMERICAN BUILDING SUPPLY INC (Continued) **1026057214**

Historic Generators:
Receive Date: 2020-03-11 00:00:00.0
Handler Name: AMERICAN BUILDING SUPPLY INC
Federal Waste Generator Description: Not a generator, verified
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 321918
NAICS Description: OTHER MILLWORK (INCLUDING FLOORING)

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

I37 **SM LOGISTICS RIALTO, LLC** **RCRA NonGen / NLR** **1024778277**
SE **1110 W MERRILL AVENUE** **CAC002998221**
1/8-1/4 **RIALTO, CA 92376**
0.224 mi.
1183 ft. **Site 1 of 5 in cluster I**

Relative: **Lower**

Actual: **1208 ft.**

RCRA NonGen / NLR:
Date Form Received by Agency: 2019-01-25 00:00:00.0
Handler Name: SM LOGISTICS RIALTO, LLC
Handler Address: 1110 W MERRILL AVENUE
Handler City,State,Zip: RIALTO, CA 92376
EPA ID: CAC002998221
Contact Name: KAREN HICKEY
Contact Address: 1140 N. COAST HIGHWAY
Contact City,State,Zip: LAGUNA BEACH, CA 92651-1342
Contact Telephone: 949-655-8229
Contact Fax: Not reported
Contact Email: KAREN@MCDONALDPROPERTYGROUP.COM
Contact Title: Not reported
EPA Region: 09
Land Type: Not reported
Federal Waste Generator Description: Not a generator, verified
Non-Notifier: Not reported
Biennial Report Cycle: Not reported
Accessibility: Not reported
Active Site Indicator: Handler Activities
State District Owner: Not reported
State District: Not reported
Mailing Address: 350 PARK AVENUE
Mailing City,State,Zip: NEW YORK, NY 10022
Owner Name: SM LOGISTICS RIALTO, LLC

SM LOGISTICS RIALTO, LLC (Continued) **1024778277**

Owner Type:	Other
Operator Name:	KAREN HICKEY
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2019-02-22 19:40:35.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No

SM LOGISTICS RIALTO, LLC (Continued) **1024778277**

Sub-Part P Indicator: No

Handler - Owner Operator:
Owner/Operator Indicator: Owner
Owner/Operator Name: SM LOGISTICS RIALTO, LLC
Legal Status: Other
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: 350 PARK AVENUE
Owner/Operator City,State,Zip: NEW YORK, NY 10022
Owner/Operator Telephone: 949-655-8229
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: KAREN HICKEY
Legal Status: Other
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: 1140 N. COAST HIGHWAY
Owner/Operator City,State,Zip: LAGUNA BEACH, CA 92651-1342
Owner/Operator Telephone: 949-655-8229
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 2019-01-25 00:00:00.0
Handler Name: SM LOGISTICS RIALTO, LLC
Federal Waste Generator Description: Not a generator, verified
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 56299
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

I38 **TOYS R US** **RCRA NonGen / NLR** **1024789277**
SE **1110 W MERRILL AVE** **CAL000062411**
1/8-1/4 **RIALTO, CA 92376**
0.224 mi.
1183 ft. **Site 2 of 5 in cluster I**

Relative: **Lower**
Actual: **1208 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:		1992-03-11 00:00:00.0
Handler Name:	TOYS R US	
Handler Address:		1110 W MERRILL AVE
Handler City,State,Zip:		RIALTO, CA 92376-0000
EPA ID:		CAL000062411
Contact Name:		JERRY KEATING/FACILITIES MGR
Contact Address:		1110 W MERRIL AVE
Contact City,State,Zip:		RIALTO, CA 92376
Contact Telephone:		909-873-0155
Contact Fax:		909-875-1349
Contact Email:		FRYER@TOYSRUS.COM
Contact Title:		Not reported
EPA Region:		09
Land Type:		Not reported
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities
State District Owner:		Not reported
State District:		Not reported
Mailing Address:		1110 W MERRILL AVE
Mailing City,State,Zip:		RIALTO, CA 92376-9108
Owner Name:		TOYS R US
Owner Type:		Other
Operator Name:		JERRY KEATING/FACILITIES MGR
Operator Type:		Other
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		Yes
Universal Waste Destination Facility:		Yes
Federal Universal Waste:		No
Active Site Fed-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site Converter Treatment storage and Disposal Facility:		Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site State-Reg Handler:		---
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		N
Sub-Part K Indicator:		Not reported
Commercial TSD Indicator:		No
Treatment Storage and Disposal Type:		Not reported
2018 GPRA Permit Baseline:		Not on the Baseline
2018 GPRA Renewals Baseline:		Not on the Baseline
Permit Renewals Workload Universe:		Not reported

TOYS R US (Continued) **1024789277**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-09-05 15:41:51.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	JERRY KEATING/FACILITIES MGR
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1110 W MERRIL AVE
Owner/Operator City,State,Zip:	RIALTO, CA 92376
Owner/Operator Telephone:	909-873-0155
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	TOYS R US
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1 GEOFFREY WAY
Owner/Operator City,State,Zip:	WAYNE, NJ 07470-2030
Owner/Operator Telephone:	973-617-3500
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

TOYS R US (Continued) **1024789277**

Historic Generators:
Receive Date: 1992-03-11 00:00:00.0
Handler Name: TOYS R US
Federal Waste Generator Description: Not a generator, verified
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 45112
NAICS Description: HOBBY, TOY, AND GAME STORES

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

I39 **SM LOGISTICS RIALTO, LLC.** **UST** **U003785195**
SE **1110 W MERRILL AVE** **AST** **N/A**
1/8-1/4 **RIALTO, CA 92376** **CHMIRS**
0.224 mi. **NPDES**
1183 ft. **Site 3 of 5 in cluster I** **San Bern. Co. Permit**
WDS

Relative:
Lower

Actual:
1208 ft.

UST:
Name: SM LOGISTICS RIALTO, LLC.
Address: 1110 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Facility ID: FA0006764
Permitting Agency: San Bernardino County Fire Department
Latitude: 34.0942
Longitude: -117.3919

Name: TOYS R US
Address: 1110 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Facility ID: FA0006764
Permitting Agency: San Bernardino County Fire Department
Latitude: 34.0942
Longitude: -117.3919

AST:
Name: TOYS R US
Address: 1110 W MERRILL AVE
City/Zip: RIALTO,92376
Certified Unified Program Agencies: Not reported
Owner: TOYS 'R' US

SM LOGISTICS RIALTO, LLC. (Continued) **U003785195**

Total Gallons:	Not reported
CERSID:	10045690
Facility ID:	FA0006764
Business Name:	TOYS R US
Phone:	909-873-0155 xt194
Fax:	909-875-1349
Mailing Address:	1110 W. MERRILL AVE.
Mailing Address City:	RIALTO
Mailing Address State:	CA
Mailing Address Zip Code:	92376
Operator Name:	TOYS R US
Operator Phone:	909-873-0155 XT 194
Owner Phone:	706-824-9990
Owner Mail Address:	1110 W MERRILL AVE
Owner State:	CA
Owner Zip Code:	92376
Owner Country:	United States
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	cal00006241

CHMIRS:

Name:	Not reported
Address:	1110 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
OES Incident Number:	12-5692
OES notification:	09/21/2012
OES Date:	Not reported
OES Time:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported

SM LOGISTICS RIALTO, LLC. (Continued) **U003785195**

Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Not reported
Spill Site:	Merchant/Business
Cleanup By:	Contractor
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Gal(s)
Other:	Not reported
Date/Time:	630
Year:	2012
Agency:	Toys R Us
Incident Date:	9/11/2012
Admin Agency:	San Bernardino County Health Department
Amount:	Not reported
Contained:	Yes
Site Type:	Not reported
E Date:	Not reported
Substance:	Fuel - Diesel
Quantity Released:	50
Unknown:	Not reported
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
#1 Pipeline:	Not reported
#2 Pipeline:	Not reported
#3 Pipeline:	Not reported
#1 Vessel >= 300 Tons:	Not reported
#2 Vessel >= 300 Tons:	Not reported
#3 Vessel >= 300 Tons:	Not reported
Evacs:	Not reported
Injuries:	Not reported
Fatals:	Not reported
Comments:	Not reported
Description:	While fueling a vehicle the tank overflowed causing the release, material flowed onto concrete and asphalt, responsible party contained and Patriot Env performed clean up.
Name:	Not reported
Address:	1110 WEST MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
OES Incident Number:	18-2136
OES notification:	04/02/2018
OES Date:	Not reported
OES Time:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported

SM LOGISTICS RIALTO, LLC. (Continued) **U003785195**

Estimated Temperature:	Not reported
Property Management:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	N/A
Spill Site:	Merchant/Business
Cleanup By:	Contractor
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Type:	PETROLEUM
Measure:	Gal(s)
Other:	Not reported
Date/Time:	630
Year:	2018
Agency:	Toy-R-Us
Incident Date:	04/02/2018
Admin Agency:	San Bernardino County Fire Department
Amount:	Not reported
Contained:	Yes
Site Type:	N/A
E Date:	Not reported
Substance:	Diesel
Quantity Released:	20-30
Unknown:	Not reported
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
#1 Pipeline:	No
#2 Pipeline:	No
#3 Pipeline:	No
#1 Vessel >= 300 Tons:	No
#2 Vessel >= 300 Tons:	No
#3 Vessel >= 300 Tons:	No
Evacs:	No
Injuries:	No
Fatals:	No
Comments:	Not reported

SM LOGISTICS RIALTO, LLC. (Continued) **U003785195**

Description: Caller states dispenser hose was leaking causing a release of 20-30 gallons of diesel onto asphalt and rain run off area. The material is no longer releasing and clean up crew is enroute. No waterways or storm drains were impacted.

NPDES:

Name:	TOYS R US
Address:	1110 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Facility Status:	Not reported
NPDES Number:	Not reported
Region:	Not reported
Agency Number:	Not reported
Regulatory Measure ID:	Not reported
Place ID:	Not reported
Order Number:	Not reported
WDID:	8 36I017192
Regulatory Measure Type:	Industrial
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	Not reported
Discharge Name:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Status:	Terminated
Status Date:	09/06/2018
Operator Name:	Toys R Us
Operator Address:	1110 W Merrill Ave
Operator City:	Rialto
Operator State:	California
Operator Zip:	92376

NPDES as of 03/2018:

NPDES Number:	CAS000001
Status:	Active
Agency Number:	0
Region:	8
Regulatory Measure ID:	213644
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	8 36I017192
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	04/08/2002
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Toys R Us
Discharge Address:	1110 W Merrill Ave
Discharge City:	Rialto
Discharge State:	California
Discharge Zip:	92376

SM LOGISTICS RIALTO, LLC. (Continued) **U003785195**

Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

SM LOGISTICS RIALTO, LLC. (Continued) **U003785195**

NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	8
Regulatory Measure ID:	213644
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	8 36I017192
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	05/09/2008
Processed Date:	04/08/2002
Status:	Active
Status Date:	04/08/2002
Place Size:	28
Place Size Unit:	Acres
Contact:	Jerry Keating
Contact Title:	Facility Manager
Contact Phone:	9098730155
Contact Phone Ext:	312
Contact Email:	jerry.keating@toysrus.com
Operator Name:	Toys R Us
Operator Address:	1110 W Merrill Ave
Operator City:	Rialto
Operator State:	California
Operator Zip:	92376
Operator Contact:	JERRY Keating
Operator Contact Title:	Facility Manager
Operator Contact Phone:	909-873-0155
Operator Contact Phone Ext:	312
Operator Contact Email:	keatingj@toysrus.com
Operator Type:	Private Business
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	909-873-0155
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported

SM LOGISTICS RIALTO, LLC. (Continued) **U003785195**

Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	Santa Ana River
Certifier:	Jerry Keating
Certifier Title:	Facilities Manager
Certification Date:	23-JUN-15
Primary Sic:	4214-Local Trucking with Storage
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

Name:	TOYS R US
Address:	1110 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Facility Status:	Terminated
NPDES Number:	CAS000001
Region:	8
Agency Number:	0
Regulatory Measure ID:	213644
Place ID:	Not reported
Order Number:	97-03-DWQ
WDID:	8 36I017192
Regulatory Measure Type:	Enrollee
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	04/08/2002
Termination Date Of Regulatory Measure:	08/31/2018
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	1110 W Merrill Ave
Discharge Name:	Toys R Us
Discharge City:	Rialto
Discharge State:	California
Discharge Zip:	92376
Status:	Not reported
Status Date:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported

NPDES as of 03/2018:

NPDES Number:	CAS000001
Status:	Active
Agency Number:	0
Region:	8
Regulatory Measure ID:	213644
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee

SM LOGISTICS RIALTO, LLC. (Continued) **U003785195**

Place ID:	Not reported
WDID:	8 36I017192
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	04/08/2002
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Toys R Us
Discharge Address:	1110 W Merrill Ave
Discharge City:	Rialto
Discharge State:	California
Discharge Zip:	92376
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported

SM LOGISTICS RIALTO, LLC. (Continued) **U003785195**

Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	8
Regulatory Measure ID:	213644
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	8 36I017192
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	05/09/2008
Processed Date:	04/08/2002
Status:	Active
Status Date:	04/08/2002
Place Size:	28
Place Size Unit:	Acres
Contact:	Jerry Keating
Contact Title:	Facility Manager
Contact Phone:	9098730155
Contact Phone Ext:	312
Contact Email:	jerry.keating@toysrus.com
Operator Name:	Toys R Us
Operator Address:	1110 W Merrill Ave
Operator City:	Rialto
Operator State:	California
Operator Zip:	92376
Operator Contact:	JERRY Keating
Operator Contact Title:	Facility Manager
Operator Contact Phone:	909-873-0155
Operator Contact Phone Ext:	312
Operator Contact Email:	keatingj@toysrus.com
Operator Type:	Private Business
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California

SM LOGISTICS RIALTO, LLC. (Continued) **U003785195**

Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	909-873-0155
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	Santa Ana River
Certifier:	Jerry Keating
Certifier Title:	Facilities Manager
Certification Date:	23-JUN-15
Primary Sic:	4214-Local Trucking with Storage
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

San Bern. Co. Permit:

Name:	SM LOGISTICS RIALTO
Address:	1110 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0006764
Owner:	SM LOGISTICS RIALTO LLC C/O MCDONALD PROPERTY GROUP
Permit Number:	PT0010780
Permit Category:	REGULAR UST ANNUAL INSPECTION (PER TANK)
Facility Status:	ACTIVE
Expiration Date:	09/30/2021

Name:	SM LOGISTICS RIALTO
Address:	1110 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0006764
Owner:	SM LOGISTICS RIALTO LLC C/O MCDONALD PROPERTY GROUP
Permit Number:	PT0010781
Permit Category:	REGULAR UST ANNUAL INSPECTION (PER TANK)
Facility Status:	ACTIVE
Expiration Date:	09/30/2021

Name:	SM LOGISTICS RIALTO
Address:	1110 W MERRILL AVE

SM LOGISTICS RIALTO, LLC. (Continued) **U003785195**

City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0006764
Owner: SM LOGISTICS RIALTO LLC C/O MCDONALD PROPERTY GROUP
Permit Number: PT0024310
Permit Category: APSA 1,320-10,000 GAL FAC CAPACITY
Facility Status: ACTIVE
Expiration Date: 09/30/2021

Name: SM LOGISTICS RIALTO
Address: 1110 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0006764
Owner: SM LOGISTICS RIALTO LLC C/O MCDONALD PROPERTY GROUP
Permit Number: PT0019282
Permit Category: WASTE INCIDENTAL UST OPERATION ONLY -PER YEAR
Facility Status: ACTIVE
Expiration Date: 09/30/2021

Name: SM LOGISTICS RIALTO
Address: 1110 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0006764
Owner: SM LOGISTICS RIALTO LLC C/O MCDONALD PROPERTY GROUP
Permit Number: PT0019281
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS
Facility Status: ACTIVE
Expiration Date: 09/30/2021

Name: SM LOGISTICS RIALTO
Address: 1110 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0006764
Owner: SM LOGISTICS RIALTO LLC C/O MCDONALD PROPERTY GROUP
Permit Number: PT0019283
Permit Category: UW HANDLER WITH ANOTHER CUPA PERMIT
Facility Status: INACTIVE
Expiration Date: 09/30/2020

Name: SM LOGISTICS RIALTO
Address: 1110 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0006764
Owner: SM LOGISTICS RIALTO LLC C/O MCDONALD PROPERTY GROUP
Permit Number: PT0022290
Permit Category: EPCRA FACILITY
Facility Status: INACTIVE
Expiration Date: 09/30/2019

Name: SM LOGISTICS RIALTO
Address: 1110 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO

SM LOGISTICS RIALTO, LLC. (Continued) **U003785195**

Facility ID: FA0006764
Owner: SM LOGISTICS RIALTO LLC C/O MCDONALD PROPERTY GROUP
Permit Number: PT0004969
Permit Category: HAZMAT HANDLER 101-250 EMPLOYEES (W/GEN PRMT)
Facility Status: INACTIVE
Expiration Date: 09/30/2019

Name: SM LOGISTICS RIALTO
Address: 1110 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0006764
Owner: SM LOGISTICS RIALTO LLC C/O MCDONALD PROPERTY GROUP
Permit Number: PT0004968
Permit Category: HAZARDOUS WASTE GENERATOR - 101-250 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 09/30/2019

WDS:
Name: TOYS R US CORP
Address: 1110 W MERRILL AVE
City: RIALTO
Facility ID: Santa Ana River 36I017192
Facility Type: Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.
Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number: CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion: 8
Facility Telephone: 9098730155
Facility Contact: JERRY KEATING
Agency Name: TOYS R US COPRORATION
Agency Address: 1110 W MERRILL
Agency City,St,Zip: RIALTO 923769107
Agency Contact: JERRY KEATING
Agency Telephone: 9098730155
Agency Type: Private
SIC Code: 0
SIC Code 2: Not reported
Primary Waste Type: Not reported
Primary Waste: Not reported
Waste Type2: Not reported
Waste2: Not reported
Primary Waste Type: Not reported
Secondary Waste: Not reported
Secondary Waste Type: Not reported
Design Flow: 0
Baseline Flow: 0
Reclamation: Not reported
POTW: Not reported
Treat To Water: Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared

SM LOGISTICS RIALTO, LLC. (Continued) **U003785195**

to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.

Complexity: Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

I40 **TOYS R US DISTRIBUTION CENTER** **SWEEPS UST** **S101591404**
SE **1110 MERRILL AVE** **CA FID UST** **N/A**
1/8-1/4 **RIALTO, CA 92376**
0.224 mi.
1183 ft. **Site 4 of 5 in cluster I**

Relative: SWEEPS UST:
Lower

Actual: Name: TOYS R US DISTRIBUTION CENTER
1208 ft. Address: 1110 MERRILL AVE
City: RIALTO
Status: Active
Comp Number: 10362
Number: 1
Board Of Equalization: Not reported
Referral Date: 03-24-92
Action Date: 03-24-92
Created Date: 06-21-90
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-010362-000001
Tank Status: A
Capacity: 12000
Active Date: 06-21-90
Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: 2

Name: TOYS R US DISTRIBUTION CENTER
Address: 1110 MERRILL AVE
City: RIALTO
Status: Active
Comp Number: 10362
Number: 1
Board Of Equalization: Not reported
Referral Date: 03-24-92
Action Date: 03-24-92
Created Date: 06-21-90
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-010362-000002
Tank Status: A
Capacity: 1000
Active Date: 06-21-90
Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: Not reported

TOYS R US DISTRIBUTION CENTER (Continued) **S101591404**

CA FID UST:
Facility ID: 36006357
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: Not reported
Mail To: Not reported
Mailing Address: 461 FROM RD
Mailing Address 2: Not reported
Mailing City,St,Zip: RIALTO 92376
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

I41 **TOYS R US** **CERS TANKS** **S113045883**
SE **1110 W MERRILL AVE** **CHMIRS** **N/A**
1/8-1/4 **RIALTO, CA 92376** **HAZNET**
0.224 mi. **CIWQS**
1183 ft. **Site 5 of 5 in cluster I** **CERS**
HWTS

Relative:
Lower

Actual:
1208 ft.

CERS TANKS:
Name: SM LOGISTICS RIALTO, LLC.
Address: 1110 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Site ID: 404209
CERS ID: 10045690
CERS Description: Underground Storage Tank

Name: SM LOGISTICS RIALTO, LLC.
Address: 1110 W MERRILL AVE
City,State,Zip: RIALTO, CA 92376
Site ID: 404209
CERS ID: 10045690
CERS Description: Aboveground Petroleum Storage

CHMIRS:
Name: Not reported
Address: 1110 W. MERRIL AVE
City,State,Zip: RIALTO, CA 92376
OES Incident Number: 17-2250
OES notification: 03/20/2017
OES Date: Not reported
OES Time: Not reported
Date Completed: **Not reported**
Property Use: Not reported
Agency Id Number: Not reported
Agency Incident Number: Not reported
Time Notified: Not reported
Time Completed: Not reported
Surrounding Area: Not reported
Estimated Temperature: Not reported

TOYS R US (Continued) **S113045883**

Property Management:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Not reported
Spill Site:	Merchant/Business
Cleanup By:	Contractor
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Type:	PETROLEUM
Measure:	Gal(s)
Other:	Not reported
Date/Time:	300
Year:	2017
Agency:	Toys R Us
Incident Date:	03/19/2017
Admin Agency:	San Bernardino County Fire Department
Amount:	Not reported
Contained:	Yes
Site Type:	Not reported
E Date:	Not reported
Substance:	Motor Oil Mixed with Water
Quantity Released:	10-May
Unknown:	Not reported
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
#1 Pipeline:	No
#2 Pipeline:	No
#3 Pipeline:	No
#1 Vessel >= 300 Tons:	No
#2 Vessel >= 300 Tons:	No
#3 Vessel >= 300 Tons:	No
Evacs:	No
Injuries:	No
Fatals:	No
Comments:	Not reported
Description:	RP states that 5-10 gallons of an oil/water

TOYS R US (Continued) **S113045883**

mixture was illegally dumped and flowed, due to a sprinkler system, into the parking lot of a Toy R Us. The release is contained, and the contractor Patriot Environmental is en-route to conduct the clean-up. No waterways were impacted.

HAZNET:

Name:	SM LOGISTICS RIALTO LLC
Address:	1110 W MERRILL AVENUE
Address 2:	Not reported
City,State,Zip:	RIALTO, CA 10022
Contact:	KAREN HICKEY
Telephone:	9496558229
Mailing Name:	Not reported
Mailing Address:	350 PARK AVENUE
Year:	2019
Gepaid:	CAC002998221
TSD EPA ID:	AZR000520304
CA Waste Code:	291 - Latex waste
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.12510
Year:	2019
Gepaid:	CAC002998221
TSD EPA ID:	AZR000520304
CA Waste Code:	134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.00000
Year:	2019
Gepaid:	CAL000062411
TSD EPA ID:	CAT080013352
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.00000
Year:	2019
Gepaid:	CAC002998221
TSD EPA ID:	AZR000520304
CA Waste Code:	223 - Unspecified oil-containing waste
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.15000
Year:	2019
Gepaid:	CAC002998221
TSD EPA ID:	AZR000520304
CA Waste Code:	331 - Off-specification, aged or surplus organics
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.29800

TOYS R US (Continued) **S113045883**

Year:	2019
Gepaid:	CAC002998221
TSD EPA ID:	AZR000520304
CA Waste Code:	512 - Other empty containers 30 gallons or more
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.06250

Year:	2018
Gepaid:	CAL000062411
TSD EPA ID:	CAD059494310
CA Waste Code:	214 - Unspecified solvent mixture
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.01000

Year:	2018
Gepaid:	CAL000062411
TSD EPA ID:	AZR000515924
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.50000

Year:	2017
Gepaid:	CAL000062411
TSD EPA ID:	CAD097030993
CA Waste Code:	135 - Unspecified aqueous solution
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.21

Year:	2017
Gepaid:	CAL000062411
TSD EPA ID:	CAD097030993
CA Waste Code:	352 - Other organic solids
Disposal Method:	-
Tons:	Not reported

Click this hyperlink while viewing on your computer to access
148 additional CA HAZNET: record(s) in the EDR Site Report.

Additional Info:

Year:	2005
Gen EPA ID:	CAL000062411
Shipment Date:	20051229
Creation Date:	7/11/2006 18:33:41
Receipt Date:	20060104
Manifest ID:	25150987
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC

TOYS R US (Continued) **S113045883**

TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.76
Waste Quantity:	200
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050818
Creation Date:	4/28/2006 18:30:32
Receipt Date:	Not reported
Manifest ID:	24745383
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY & OVERTON INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	- Not reported
Quantity Tons:	0.108
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050817
Creation Date:	4/13/2006 18:45:56
Receipt Date:	20050819
Manifest ID:	24745383
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY & OVERTON INC
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.099
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported

TOYS R US (Continued) **S113045883**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050630
Creation Date:	10/11/2005 18:31:29
Receipt Date:	20050701
Manifest ID:	24510176
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.912
Waste Quantity:	240
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050610
Creation Date:	10/27/2005 10:09:28
Receipt Date:	20050614
Manifest ID:	24513154
Trans EPA ID:	CA0000970392
Trans Name:	ENVIRONMENTAL RECOVERY SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080033681
Trans Name:	DK ENVIRONMENTAL
TSDF Alt EPA ID:	CAT080033681
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.0225
Waste Quantity:	45
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050610
Creation Date:	8/17/2005 18:32:59
Receipt Date:	20050616
Manifest ID:	24513153

TOYS R US (Continued) **S113045883**

Trans EPA ID:	CA0000970392
Trans Name:	ENVIRONMENTAL RECOVERY SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	TERIS - WEST
TSDF Alt EPA ID:	CAD044429835
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	- Not reported
Quantity Tons:	0.1815
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20050411
Creation Date:	7/21/2005 18:32:26
Receipt Date:	20050411
Manifest ID:	24504086
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	NONE
Meth Code:	R01 - Recycler
Quantity Tons:	0.836
Waste Quantity:	220
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20050308
Creation Date:	5/27/2005 18:30:42
Receipt Date:	20050311
Manifest ID:	24201201
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SVC'S
Trans 2 EPA ID:	CAD009452657
Trans 2 Name:	ROMIC ENVIRONMENTAL
TSDF EPA ID:	AZD009015389
Trans Name:	ROMIC ENVIRONMENTAL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	141 - Off-specification, aged, or surplus inorganics

TOYS R US (Continued) **S113045883**

RCRA Code:	NONE
Meth Code:	- Not reported
Quantity Tons:	0.00417
Waste Quantity:	1
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050308
Creation Date:	5/27/2005 18:30:42
Receipt Date:	20050311
Manifest ID:	24201201
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SVC'S
Trans 2 EPA ID:	CAD009452657
Trans 2 Name:	ROMIC ENVIRONMENTAL
TSDF EPA ID:	AZD009015389
Trans Name:	ROMIC ENVIRONMENTAL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	NONE
Meth Code:	- Not reported
Quantity Tons:	0.0396
Waste Quantity:	12
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050308
Creation Date:	5/27/2005 18:30:42
Receipt Date:	20050311
Manifest ID:	24201201
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SVC'S
Trans 2 EPA ID:	CAD009452657
Trans 2 Name:	ROMIC ENVIRONMENTAL
TSDF EPA ID:	AZD009015389
Trans Name:	ROMIC ENVIRONMENTAL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	- Not reported
Quantity Tons:	0.0198
Waste Quantity:	6
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

TOYS R US (Continued) **S113045883**

Additional Code 5: Not reported

Additional Info:
Year: 2009
Gen EPA ID: CAL000062411

Shipment Date: 20091124
Creation Date: 2/3/2010 18:30:35
Receipt Date: 20091214
Manifest ID: 002190353SKS
Trans EPA ID: TXR000050930
Trans Name: SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD093459485
Trans Name: SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 214 - Unspecified solvent mixture
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 0.108
Waste Quantity: 30
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20090922
Creation Date: 3/5/2010 18:30:45
Receipt Date: 20091004
Manifest ID: 002013116SKS
Trans EPA ID: TXR000050930
Trans Name: SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID: OKD981588791
Trans 2 Name: TRIAD TRANSPORT
TSDF EPA ID: TXD077603371
Trans Name: SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 214 - Unspecified solvent mixture
RCRA Code: Not reported
Meth Code: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons: 0.15
Waste Quantity: 300
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20090819
Creation Date: 9/25/2009 18:30:20

TOYS R US (Continued) **S113045883**

Receipt Date:	20090820
Manifest ID:	005858927JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.06
Waste Quantity:	120
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20090728
Creation Date:	1/8/2010 18:30:28
Receipt Date:	20090810
Manifest ID:	002007108SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20090618
Creation Date:	10/29/2009 18:30:09
Receipt Date:	20090630
Manifest ID:	001939553SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC

TOYS R US (Continued) **S113045883**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090527
Creation Date:	7/2/2009 18:30:26
Receipt Date:	20090604
Manifest ID:	005560940JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.005
Waste Quantity:	10
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090527
Creation Date:	7/2/2009 18:30:26
Receipt Date:	20090604
Manifest ID:	005560940JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.02
Waste Quantity:	40

TOYS R US (Continued) **S113045883**

Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090409
Creation Date:	8/17/2009 18:30:09
Receipt Date:	20090417
Manifest ID:	001706894SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.108
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090303
Creation Date:	4/8/2009 18:31:11
Receipt Date:	20090305
Manifest ID:	005559238JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.06
Waste Quantity:	120
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090210

TOYS R US (Continued) **S113045883**

Creation Date:	4/3/2009 18:30:19
Receipt Date:	20090223
Manifest ID:	001559302SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD093459485
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.108
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1999
Gen EPA ID:	CAL000062411
Shipment Date:	19991218
Creation Date:	2/1/2000 0:00:00
Receipt Date:	19991218
Manifest ID:	99446438
Trans EPA ID:	CAD009452657
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD009452657
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.085
Waste Quantity:	25
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19991008
Creation Date:	12/16/1999 0:00:00
Receipt Date:	19991011
Manifest ID:	99565947
Trans EPA ID:	CAD982444481

TOYS R US (Continued) **S113045883**

Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.228
Waste Quantity:	60
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19991008
Creation Date:	12/16/1999 0:00:00
Receipt Date:	19991011
Manifest ID:	99565947
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	6.08
Waste Quantity:	1600
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19991008
Creation Date:	12/16/1999 0:00:00
Receipt Date:	19991011
Manifest ID:	99565947
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported

TOYS R US (Continued) **S113045883**

Meth Code:	- Not reported
Quantity Tons:	0
Waste Quantity:	0
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19991008
Creation Date:	12/17/1999 0:00:00
Receipt Date:	19991014
Manifest ID:	99565948
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19990512
Creation Date:	7/7/1999 0:00:00
Receipt Date:	19990512
Manifest ID:	96878515
Trans EPA ID:	CAD009452657
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD009452657
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.17
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

TOYS R US (Continued) **S113045883**

Shipment Date:	19990305
Creation Date:	5/17/1999 0:00:00
Receipt Date:	19990308
Manifest ID:	98718931
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.3
Waste Quantity:	600
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19990305
Creation Date:	5/17/1999 0:00:00
Receipt Date:	19990322
Manifest ID:	98718930
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	CAD000603738
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19990305
Creation Date:	5/17/1999 0:00:00
Receipt Date:	19990308
Manifest ID:	98718931
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481

TOYS R US (Continued) **S113045883**

Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.627
Waste Quantity:	165
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19990222
Creation Date:	4/20/1999 0:00:00
Receipt Date:	19990222
Manifest ID:	98715594
Trans EPA ID:	CAD982030173
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	241 - Tank bottom waste 251 Still bottoms with halogenated organics
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	6.255
Waste Quantity:	1500
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1995
Gen EPA ID:	CAL000062411

Shipment Date:	19950424
Creation Date:	4/2/1996 0:00:00
Receipt Date:	19950425
Manifest ID:	93159185
Trans EPA ID:	CAD059240713
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080011059
Trans Name:	Not reported
TSDF Alt EPA ID:	CAT080011059
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported

TOYS R US (Continued) **S113045883**

Meth Code: R01 - Recycler
Quantity Tons: 6.84
Waste Quantity: 1800
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2002
Gen EPA ID: CAL000062411

Shipment Date: 20021218
Creation Date: 4/2/2003 18:31:15
Receipt Date: 20021218
Manifest ID: 22224335
Trans EPA ID: CAD982444481
Trans Name: Not reported
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD982444481
Trans Name: Not reported
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 241 - Tank bottom waste 251 Still bottoms with halogenated organics
RCRA Code: Not reported
Meth Code: H01 - Transfer Station
Quantity Tons: 4.17
Waste Quantity: 1000
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20021029
Creation Date: 2/21/2003 10:41:38
Receipt Date: 20021029
Manifest ID: 21702617
Trans EPA ID: CAD982444481
Trans Name: Not reported
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD982444481
Trans Name: Not reported
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 352 - Other organic solids
RCRA Code: Not reported
Meth Code: H01 - Transfer Station
Quantity Tons: 0.04
Waste Quantity: 80
Quantity Unit: P
Additional Code 1: Not reported

TOYS R US (Continued) **S113045883**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20021029
Creation Date:	2/21/2003 10:41:38
Receipt Date:	20021029
Manifest ID:	21702617
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.021
Waste Quantity:	5
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20021029
Creation Date:	2/21/2003 10:41:38
Receipt Date:	20021029
Manifest ID:	21702616
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.189
Waste Quantity:	45
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20021029
Creation Date:	2/21/2003 10:41:38
Receipt Date:	20021101
Manifest ID:	21702615

TOYS R US (Continued) **S113045883**

Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	CAR000075689
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.01
Waste Quantity:	20
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20021029
Creation Date:	2/21/2003 10:41:38
Receipt Date:	20021029
Manifest ID:	21702616
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.836
Waste Quantity:	220
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20021029
Creation Date:	2/21/2003 10:41:38
Receipt Date:	20021029
Manifest ID:	21702616
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil

TOYS R US (Continued) **S113045883**

RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.038
Waste Quantity:	10
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20021029
Creation Date:	2/21/2003 10:41:38
Receipt Date:	20021029
Manifest ID:	21702617
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.021
Waste Quantity:	5
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20021029
Creation Date:	2/21/2003 10:41:38
Receipt Date:	20021029
Manifest ID:	21702617
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.3
Waste Quantity:	600
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

TOYS R US (Continued) **S113045883**

Additional Code 5: Not reported

Shipment Date: 20021018
Creation Date: 2/10/2003 18:31:16
Receipt Date: 20021018
Manifest ID: 21702449
Trans EPA ID: CAD982444481
Trans Name: Not reported
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD982444481
Trans Name: Not reported
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 241 - Tank bottom waste 251 Still bottoms with halogenated organics
RCRA Code: Not reported
Meth Code: H01 - Transfer Station
Quantity Tons: 5.2125
Waste Quantity: 1250
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2017
Gen EPA ID: CAL000062411

Shipment Date: 20170720
Creation Date: 7/16/2018 18:31:15
Receipt Date: 20170726
Manifest ID: 017447908JJK
Trans EPA ID: CAD028277036
Trans Name: ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID: CAL000409721
Trans 2 Name: OMEGA VAL TRANSPORTATION INC
TSDF EPA ID: AZR000515924
Trans Name: YUMA YES LLC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 223 - Unspecified oil-containing waste
RCRA Code: Not reported
Meth Code: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons: 0.01
Waste Quantity: 20
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20170720
Creation Date: 6/20/2018 18:30:25

TOYS R US (Continued) **S113045883**

Receipt Date:	20170725
Manifest ID:	017447909JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.462
Waste Quantity:	110
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20170307
Creation Date:	5/11/2018 18:32:50
Receipt Date:	20170314
Manifest ID:	016757864JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	CAR000175422
Trans 2 Name:	WORLD WIDE RECOVERY INC
TSDF EPA ID:	AZR000515924
Trans Name:	YUMA YES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20170307
Creation Date:	5/25/2017 18:30:38
Receipt Date:	20170313
Manifest ID:	016757863JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993

TOYS R US (Continued) **S113045883**

Trans Name:	US ECOLOGY VERNON, INC.
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.21
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170307
Creation Date:	5/25/2017 18:30:38
Receipt Date:	20170313
Manifest ID:	016757863JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	US ECOLOGY VERNON, INC.
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D008
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0075
Waste Quantity:	15
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170307
Creation Date:	5/25/2017 18:30:38
Receipt Date:	20170313
Manifest ID:	016757863JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	US ECOLOGY VERNON, INC.
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	Not reported

TOYS R US (Continued) **S113045883**

Waste Quantity:	Not reported
Quantity Unit:	Not reported
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2011
Gen EPA ID:	CAL000062411
Shipment Date:	20111101
Creation Date:	1/20/2012 20:31:22
Receipt Date:	20111103
Manifest ID:	009007907JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS INDUSTRY INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111101
Creation Date:	1/20/2012 20:31:22
Receipt Date:	20111103
Manifest ID:	009007907JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS INDUSTRY INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported

TOYS R US (Continued) **S113045883**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111101
Creation Date:	1/20/2012 20:31:22
Receipt Date:	20111103
Manifest ID:	009007907JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS INDUSTRY INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D008
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0125
Waste Quantity:	25
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111026
Creation Date:	4/11/2012 20:30:23
Receipt Date:	20111101
Manifest ID:	002596685SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT
TSDF EPA ID:	CAT000613893
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110802
Creation Date:	10/22/2011 18:30:35

TOYS R US (Continued) **S113045883**

Receipt Date:	20110810
Manifest ID:	009011969JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.168
Waste Quantity:	40
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20110802
Creation Date:	10/22/2011 18:30:35
Receipt Date:	20110810
Manifest ID:	009011969JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.063
Waste Quantity:	15
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20110802
Creation Date:	10/19/2011 18:30:23
Receipt Date:	20110804
Manifest ID:	009011970JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993

TOYS R US (Continued) **S113045883**

Trans Name:	SIEMENS INDUSTRY INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D008
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.015
Waste Quantity:	30
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110802
Creation Date:	10/19/2011 18:30:23
Receipt Date:	20110804
Manifest ID:	009011970JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS INDUSTRY INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.06
Waste Quantity:	120
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110802
Creation Date:	10/22/2011 18:30:35
Receipt Date:	20110810
Manifest ID:	009011969JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	F002
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.153

TOYS R US (Continued) **S113045883**

Waste Quantity:	45
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110719
Creation Date:	1/12/2012 18:30:15
Receipt Date:	20110725
Manifest ID:	001965849SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000613893
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2007
Gen EPA ID:	CAL000062411
Shipment Date:	20071128
Creation Date:	3/4/2008 18:30:41
Receipt Date:	20071206
Manifest ID:	003549740JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D008
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.25
Waste Quantity:	500
Quantity Unit:	P
Additional Code 1:	Not reported

TOYS R US (Continued) **S113045883**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071114
Creation Date:	2/29/2008 18:30:25
Receipt Date:	20071121
Manifest ID:	003551353JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	791 - Liquids with pH < 2 792 Liquids with pH < 2 with metals
RCRA Code:	D002
Meth Code:	H135 - Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Quantity Tons:	0.417
Waste Quantity:	100
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071114
Creation Date:	2/29/2008 18:30:25
Receipt Date:	20071121
Manifest ID:	003551353JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	791 - Liquids with pH < 2 792 Liquids with pH < 2 with metals
RCRA Code:	D002
Meth Code:	H135 - Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Quantity Tons:	0.2085
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071106
Creation Date:	4/22/2008 18:30:17

TOYS R US (Continued) **S113045883**

Receipt Date:	20071119
Manifest ID:	000601758SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20071019
Creation Date:	1/8/2008 18:31:04
Receipt Date:	20071024
Manifest ID:	003184957JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO/KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.055
Waste Quantity:	110
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20070920
Creation Date:	1/9/2008 18:30:28
Receipt Date:	20071004
Manifest ID:	003170738JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported

TOYS R US (Continued) **S113045883**

TSDF Alt Name:	Not reported
Waste Code Description:	791 - Liquids with pH < 2 792 Liquids with pH < 2 with metals
RCRA Code:	D002
Meth Code:	H135 - Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Quantity Tons:	0.417
Waste Quantity:	100
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20070920
Creation Date:	1/9/2008 18:30:28
Receipt Date:	20071004
Manifest ID:	003170738JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	791 - Liquids with pH < 2 792 Liquids with pH < 2 with metals
RCRA Code:	D002
Meth Code:	H135 - Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Quantity Tons:	0.22935
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20070830
Creation Date:	11/5/2007 18:30:58
Receipt Date:	20070831
Manifest ID:	002990191JJK
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.38
Waste Quantity:	100

TOYS R US (Continued) **S113045883**

Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20070823
Creation Date:	3/4/2008 18:30:48
Receipt Date:	20070831
Manifest ID:	000534589SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	Not reported
Trans Name:	Not reported
TSDF Alt EPA ID:	TXD077603371
TSDF Alt Name:	SAFETY-KLEEN SYSTEMS INC
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20070808
Creation Date:	1/8/2008 18:30:29
Receipt Date:	20070816
Manifest ID:	003186945JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	123 - Unspecified alkaline solution
RCRA Code:	D002
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.005
Waste Quantity:	10
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

TOYS R US (Continued) **S113045883**

Additional Info:

Year:	2013
Gen EPA ID:	CAL000062411
Shipment Date:	20131205
Creation Date:	5/10/2014 22:15:07
Receipt Date:	20131216
Manifest ID:	004096611SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	AZR000508515
Trans 2 Name:	SLT
TSDF EPA ID:	NED981723513
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES IN
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H040 - Incineration--Thermal Destruction Other Than Use As A Fuel
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20131114
Creation Date:	1/8/2014 22:15:18
Receipt Date:	20131121
Manifest ID:	011817948JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0075
Waste Quantity:	15
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20131114
Creation Date:	1/8/2014 22:15:18
Receipt Date:	20131121
Manifest ID:	011817948JJK

TOYS R US (Continued) **S113045883**

Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.3
Waste Quantity:	600
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20130909
Creation Date:	11/4/2013 22:15:04
Receipt Date:	20130916
Manifest ID:	003919621SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20130424
Creation Date:	6/20/2013 22:15:06
Receipt Date:	20130502
Manifest ID:	011353471JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS INDUSTRY INC
TSDF Alt EPA ID:	Not reported

TOYS R US (Continued) **S113045883**

TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20130424
Creation Date:	6/20/2013 22:15:06
Receipt Date:	20130502
Manifest ID:	011353470JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS INDUSTRY INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.068
Waste Quantity:	20
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20130319
Creation Date:	7/17/2013 22:15:13
Receipt Date:	20130326
Manifest ID:	003628677SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000613893
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0425
Waste Quantity:	85

TOYS R US (Continued) **S113045883**

Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 1996
Gen EPA ID: CAL000062411

Shipment Date: 19960417
Creation Date: 10/16/1996 0:00:00
Receipt Date: 19960423
Manifest ID: 95845982
Trans EPA ID: CAL000063809
Trans Name: Not reported
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD982444481
Trans Name: Not reported
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 223 - Unspecified oil-containing waste
RCRA Code: Not reported
Meth Code: H01 - Transfer Station
Quantity Tons: 0.15
Waste Quantity: 300
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 19960417
Creation Date: 10/4/1996 0:00:00
Receipt Date: 19960422
Manifest ID: 95845978
Trans EPA ID: CAL000063809
Trans Name: Not reported
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD000088252
Trans Name: Not reported
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 212 - Oxygenated solvents (acetone, butanol, ethyl acetate, etc.
RCRA Code: D001
Meth Code: H01 - Transfer Station
Quantity Tons: 0
Waste Quantity: 55
Quantity Unit: *
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported

TOYS R US (Continued) **S113045883**

Additional Code 5: Not reported

Additional Info:
Year: 2016
Gen EPA ID: CAL000062411

Shipment Date: 20151118
Creation Date: 9/29/2016 18:33:11
Receipt Date: 20151213
Manifest ID: 015162524JJK
Trans EPA ID: CAD028277036
Trans Name: ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID: MAD039322250
Trans 2 Name: CLEAN HARBORS ENV
TSDF EPA ID: ARD069748192
Trans Name: CLEAN HARBORS EL DORADO LLC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 343 - Unspecified organic liquid mixture
RCRA Code: D002
Meth Code: H040 - Incineration--Thermal Destruction Other Than Use As A Fuel
Quantity Tons: 0.005
Waste Quantity: 10
Quantity Unit: P
Additional Code 1: D001
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20151118
Creation Date: 7/14/2016 18:31:06
Receipt Date: 20151125
Manifest ID: 015162523JJK
Trans EPA ID: CAD028277036
Trans Name: ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD008252405
Trans Name: PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 343 - Unspecified organic liquid mixture
RCRA Code: Not reported
Meth Code: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons: 0.4
Waste Quantity: 800
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20151118
Creation Date: 1/11/2016 22:16:49
Receipt Date: 20151119

TOYS R US (Continued) **S113045883**

Manifest ID:	015162566JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	EVOQUA WATER TECHNOLOGIES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0375
Waste Quantity:	75
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151118
Creation Date:	7/14/2016 18:31:06
Receipt Date:	20151125
Manifest ID:	015162523JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151020
Creation Date:	1/21/2016 22:16:16
Receipt Date:	20151109
Manifest ID:	005078351SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported

TOYS R US (Continued) **S113045883**

TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150730
Creation Date:	11/4/2015 22:15:23
Receipt Date:	20150814
Manifest ID:	004806841SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150529
Creation Date:	8/20/2015 22:15:20
Receipt Date:	20150608
Manifest ID:	004736137SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150

TOYS R US (Continued) **S113045883**

Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150324
Creation Date:	6/26/2015 22:15:55
Receipt Date:	20150410
Manifest ID:	004736136SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2008
Gen EPA ID:	CAL000062411
Shipment Date:	20081203
Creation Date:	2/4/2009 18:30:27
Receipt Date:	20081210
Manifest ID:	005134621JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.275
Waste Quantity:	550
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

TOYS R US (Continued) **S113045883**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081203
Creation Date:	2/4/2009 18:30:35
Receipt Date:	20081211
Manifest ID:	005134620JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081203
Creation Date:	2/4/2009 18:30:35
Receipt Date:	20081211
Manifest ID:	005134620JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081203
Creation Date:	2/4/2009 18:30:35
Receipt Date:	20081211
Manifest ID:	005134620JJK

TOYS R US (Continued) **S113045883**

Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D008
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.005
Waste Quantity:	10
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081114
Creation Date:	1/9/2009 18:30:26
Receipt Date:	20081201
Manifest ID:	001522022SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD093459485
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.18
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20080915
Creation Date:	10/30/2008 18:30:08
Receipt Date:	20080918
Manifest ID:	005135636JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported

TOYS R US (Continued) **S113045883**

TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0375
Waste Quantity:	75
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20080910
Creation Date:	10/13/2008 18:30:55
Receipt Date:	20080921
Manifest ID:	000748049SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD093459485
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	0.18
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20080619
Creation Date:	8/8/2008 18:30:44
Receipt Date:	20080703
Manifest ID:	001078801SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD093459485
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	0.216
Waste Quantity:	60
Quantity Unit:	G
Additional Code 1:	Not reported

TOYS R US (Continued) **S113045883**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20080414
Creation Date:	5/30/2008 18:30:08
Receipt Date:	20080421
Manifest ID:	000747792SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	CAD093459485
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	1.08
Waste Quantity:	300
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20080121
Creation Date:	10/30/2008 18:30:39
Receipt Date:	20080129
Manifest ID:	000602074SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2012
Gen EPA ID:	CAL000062411

TOYS R US (Continued) **S113045883**

Shipment Date:	20121227
Creation Date:	5/4/2013 22:15:12
Receipt Date:	20130102
Manifest ID:	003303426SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000613893
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.01
Waste Quantity:	20
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20121016
Creation Date:	1/5/2013 22:15:31
Receipt Date:	20121018
Manifest ID:	008997893JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS INDUSTRY INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20121016
Creation Date:	1/5/2013 22:15:26
Receipt Date:	20121024
Manifest ID:	008997895JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported

TOYS R US (Continued) **S113045883**

Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS-WILMINGTON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.005
Waste Quantity:	10
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121016
Creation Date:	1/5/2013 22:15:26
Receipt Date:	20121024
Manifest ID:	008997895JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS-WILMINGTON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D002
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0075
Waste Quantity:	15
Quantity Unit:	P
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121016
Creation Date:	1/5/2013 22:15:31
Receipt Date:	20121018
Manifest ID:	008997893JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS INDUSTRY INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported

TOYS R US (Continued) **S113045883**

Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.125
Waste Quantity:	250
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121016
Creation Date:	1/5/2013 22:15:31
Receipt Date:	20121018
Manifest ID:	008997893JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS INDUSTRY INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	491 - Unspecified sludge waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.125
Waste Quantity:	250
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121016
Creation Date:	12/24/2012 22:15:22
Receipt Date:	20121024
Manifest ID:	008997751JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.25
Waste Quantity:	500
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

TOYS R US (Continued) **S113045883**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121010
Creation Date:	12/28/2012 22:15:08
Receipt Date:	20121010
Manifest ID:	008997749JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	222 - Oil/water separation sludge
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	1.4595
Waste Quantity:	350
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20120710
Creation Date:	5/31/2013 22:15:05
Receipt Date:	20120717
Manifest ID:	003227099SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000613893
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0375
Waste Quantity:	75
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20120501
Creation Date:	7/26/2012 22:15:11
Receipt Date:	20120509
Manifest ID:	009566737JJK

TOYS R US (Continued) **S113045883**

Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.09
Waste Quantity:	180
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2014
Gen EPA ID:	CAL000062411
Shipment Date:	20141103
Creation Date:	1/8/2015 22:15:01
Receipt Date:	20141122
Manifest ID:	004510570SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20140812
Creation Date:	10/22/2014 22:15:04
Receipt Date:	20140829
Manifest ID:	004413291SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported

TOYS R US (Continued) **S113045883**

TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20140725
Creation Date:	9/23/2014 22:15:24
Receipt Date:	20140731
Manifest ID:	013150831JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	EVOQUA WATER TECHNOLOGIES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0375
Waste Quantity:	75
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20140520
Creation Date:	8/17/2014 22:15:06
Receipt Date:	20140604
Manifest ID:	004283741SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No

TOYS R US (Continued) **S113045883**

	Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.04
Waste Quantity:	80
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2004
Gen EPA ID:	CAL000062411
Shipment Date:	20041223
Creation Date:	3/17/2005 18:34:39
Receipt Date:	20041229
Manifest ID:	24016410
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080033681
Trans Name:	D / K - ENVIRONMENTAL
TSDF Alt EPA ID:	CAT080033681
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	NONE
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.8428
Waste Quantity:	1
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20041223
Creation Date:	3/17/2005 18:34:39
Receipt Date:	20041229
Manifest ID:	24016410
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080033681
Trans Name:	D / K - ENVIRONMENTAL
TSDF Alt EPA ID:	CAT080033681
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	NONE
Meth Code:	R01 - Recycler
Quantity Tons:	0.01
Waste Quantity:	20
Quantity Unit:	P
Additional Code 1:	Not reported

TOYS R US (Continued) **S113045883**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20041223
Creation Date:	3/17/2005 18:34:39
Receipt Date:	20041229
Manifest ID:	24016410
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080033681
Trans Name:	D / K - ENVIRONMENTAL
TSDF Alt EPA ID:	CAT080033681
TSDF Alt Name:	Not reported
Waste Code Description:	291 - Latex waste
RCRA Code:	NONE
Meth Code:	R01 - Recycler
Quantity Tons:	0.0625
Waste Quantity:	125
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20041223
Creation Date:	3/17/2005 18:34:39
Receipt Date:	20041229
Manifest ID:	24016411
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	NONE
Meth Code:	R01 - Recycler
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20040901
Creation Date:	12/22/2004 18:31:08
Receipt Date:	20040902
Manifest ID:	23553123

TOYS R US (Continued) **S113045883**

Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	291 - Latex waste
RCRA Code:	NONE
Meth Code:	R01 - Recycler
Quantity Tons:	0.10425
Waste Quantity:	25
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20040901
Creation Date:	12/22/2004 18:31:08
Receipt Date:	20040902
Manifest ID:	23553123
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	NONE
Meth Code:	R01 - Recycler
Quantity Tons:	0.209
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20040901
Creation Date:	12/22/2004 18:31:08
Receipt Date:	20040902
Manifest ID:	23553125
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids

TOYS R US (Continued) **S113045883**

RCRA Code:	NONE
Meth Code:	R01 - Recycler
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20040901
Creation Date:	1/11/2005 18:31:27
Receipt Date:	20040910
Manifest ID:	23553126
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	CAD009452657
Trans 2 Name:	ROMIC ENVIRONMENTAL
TSDF EPA ID:	AZD009015389
Trans Name:	ROMIC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	461 - Paint sludge
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.1251
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20040326
Creation Date:	10/14/2004 7:49:48
Receipt Date:	20040405
Manifest ID:	22828715
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080033681
Trans Name:	D/K ENVIRONMENTAL
TSDF Alt EPA ID:	CAT080033681
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	2
Waste Quantity:	4000
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

TOYS R US (Continued) **S113045883**

Additional Code 5: Not reported

Shipment Date: 20040211
Creation Date: 8/20/2004 9:49:45
Receipt Date: 20040211
Manifest ID: 23561675
Trans EPA ID: CAD982444481
Trans Name: FILTER RECYCLING SERVICES INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD982444481
Trans Name: FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID: CAD982444481
TSDF Alt Name: Not reported
Waste Code Description: 291 - Latex waste
RCRA Code: Not reported
Meth Code: H01 - Transfer Station
Quantity Tons: 0.01251
Waste Quantity: 3
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2001
Gen EPA ID: CAL000062411

Shipment Date: 20011109
Creation Date: 1/29/2002 0:00:00
Receipt Date: 20011112
Manifest ID: 21703766
Trans EPA ID: CAD982444481
Trans Name: Not reported
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD982444481
Trans Name: Not reported
TSDF Alt EPA ID: CAD982444481
TSDF Alt Name: Not reported
Waste Code Description: 221 - Waste oil and mixed oil
RCRA Code: Not reported
Meth Code: H01 - Transfer Station
Quantity Tons: 0.76
Waste Quantity: 200
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20011109
Creation Date: 1/16/2002 0:00:00
Receipt Date: 20011115

TOYS R US (Continued) **S113045883**

Manifest ID:	21703765
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0875
Waste Quantity:	175
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20010718
Creation Date:	10/1/2001 0:00:00
Receipt Date:	20010718
Manifest ID:	20508086
Trans EPA ID:	CAL000113451
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000113451
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.068
Waste Quantity:	20
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20010426
Creation Date:	7/10/2001 0:00:00
Receipt Date:	20010426
Manifest ID:	99705558
Trans EPA ID:	CAR000079731
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

TOYS R US (Continued) **S113045883**

Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20010423
Creation Date:	7/10/2001 0:00:00
Receipt Date:	20010502
Manifest ID:	20772264
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20010423
Creation Date:	7/10/2001 0:00:00
Receipt Date:	20010424
Manifest ID:	20772263
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.456
Waste Quantity:	120
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

TOYS R US (Continued) **S113045883**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20010423
Creation Date:	7/10/2001 0:00:00
Receipt Date:	20010424
Manifest ID:	20772263
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1997
Gen EPA ID:	CAL000062411
Shipment Date:	19971022
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19971023
Manifest ID:	96863064
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.231
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19971022
Creation Date:	7/23/1998 0:00:00

TOYS R US (Continued) **S113045883**

Receipt Date:	19971023
Manifest ID:	96863064
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19971022
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19971023
Manifest ID:	96863064
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.836
Waste Quantity:	220
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19971022
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19971023
Manifest ID:	96863064
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD982444481

TOYS R US (Continued) **S113045883**

TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.125
Waste Quantity:	250
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19970702
Creation Date:	12/4/1997 0:00:00
Receipt Date:	19970703
Manifest ID:	96863293
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0125
Waste Quantity:	25
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19970630
Creation Date:	12/4/1997 0:00:00
Receipt Date:	19970701
Manifest ID:	96863280
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.38
Waste Quantity:	100
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported

TOYS R US (Continued) **S113045883**

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19970630
Creation Date:	12/4/1997 0:00:00
Receipt Date:	19970701
Manifest ID:	96863280
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19970630
Creation Date:	12/4/1997 0:00:00
Receipt Date:	19970701
Manifest ID:	96863280
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.17
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19970506
Creation Date:	7/17/1997 0:00:00
Receipt Date:	19970506
Manifest ID:	96864550
Trans EPA ID:	CAD982444481

TOYS R US (Continued) **S113045883**

Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	211 - Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.
RCRA Code:	F001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0083
Waste Quantity:	2
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19970506
Creation Date:	7/17/1997 0:00:00
Receipt Date:	19970506
Manifest ID:	96864550
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	122 - Alkaline solution without metals (pH > 12.5
RCRA Code:	D002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0041
Waste Quantity:	1
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2003
Gen EPA ID:	CAL000062411

Shipment Date:	20031028
Creation Date:	8/5/2004 10:07:02
Receipt Date:	20031028
Manifest ID:	22626805
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481

TOYS R US (Continued) **S113045883**

Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.21
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031028
Creation Date:	8/5/2004 10:07:02
Receipt Date:	20031028
Manifest ID:	22626805
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031028
Creation Date:	8/5/2004 10:07:02
Receipt Date:	20031028
Manifest ID:	22626805
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P

TOYS R US (Continued) **S113045883**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030716
Creation Date:	7/23/2004 13:22:40
Receipt Date:	20030717
Manifest ID:	22633548
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	512 - Other empty containers 30 gallons or more
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.04
Waste Quantity:	80
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030701
Creation Date:	7/22/2004 7:52:41
Receipt Date:	20030702
Manifest ID:	22633309
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030624
Creation Date:	7/22/2004 7:52:41
Receipt Date:	20030630

TOYS R US (Continued) **S113045883**

Manifest ID:	22633216
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.627
Waste Quantity:	165
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20030515
Creation Date:	7/20/2004 12:51:42
Receipt Date:	20030521
Manifest ID:	22632914
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	341 - Organic liquids (nonsolvents) with halogens
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.22935
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20030515
Creation Date:	6/23/2004 9:59:25
Receipt Date:	20030515
Manifest ID:	22632913
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported

TOYS R US (Continued) **S113045883**

Waste Code Description:	291 - Latex waste
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.22935
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030203
Creation Date:	5/18/2003 14:32:26
Receipt Date:	20030207
Manifest ID:	22557175
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	CAR000075689
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	D001
Meth Code:	T01 - Treatment, Tank
Quantity Tons:	0.22935
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030203
Creation Date:	8/2/2004 9:38:01
Receipt Date:	20030211
Manifest ID:	22557174
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	CAL000113451
Trans 2 Name:	Not reported
TSDF EPA ID:	AZD009015389
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Meth Code:	- Not reported
Quantity Tons:	Not reported
Waste Quantity:	Not reported
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

TOYS R US (Continued) **S113045883**

Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2015
Gen EPA ID: CAL000062411

Shipment Date: 20151118
Creation Date: 7/14/2016 18:31:06
Receipt Date: 20151125
Manifest ID: 015162523JJK
Trans EPA ID: CAD028277036
Trans Name: ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD008252405
Trans Name: PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 343 - Unspecified organic liquid mixture
RCRA Code: Not reported
Meth Code: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons: 0.4
Waste Quantity: 800
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20151118
Creation Date: 1/11/2016 22:16:49
Receipt Date: 20151119
Manifest ID: 015162566JJK
Trans EPA ID: CAD028277036
Trans Name: ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD097030993
Trans Name: EVOQUA WATER TECHNOLOGIES LLC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 352 - Other organic solids
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 0.0375
Waste Quantity: 75
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20151118

TOYS R US (Continued) **S113045883**

Creation Date:	9/29/2016 18:33:11
Receipt Date:	20151213
Manifest ID:	015162524JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENV
TSDF EPA ID:	ARD069748192
Trans Name:	CLEAN HARBORS EL DORADO LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D002
Meth Code:	H040 - Incineration--Thermal Destruction Other Than Use As A Fuel
Quantity Tons:	0.005
Waste Quantity:	10
Quantity Unit:	P
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20151118
Creation Date:	7/14/2016 18:31:06
Receipt Date:	20151125
Manifest ID:	015162523JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20151020
Creation Date:	1/21/2016 22:16:16
Receipt Date:	20151109
Manifest ID:	005078351SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC

TOYS R US (Continued) **S113045883**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150730
Creation Date:	11/4/2015 22:15:23
Receipt Date:	20150814
Manifest ID:	004806841SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150529
Creation Date:	8/20/2015 22:15:20
Receipt Date:	20150608
Manifest ID:	004736137SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075

TOYS R US (Continued) **S113045883**

Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150324
Creation Date:	6/26/2015 22:15:55
Receipt Date:	20150410
Manifest ID:	004736136SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1993
Gen EPA ID:	CAL000062411
Shipment Date:	19930624
Creation Date:	9/11/1995 0:00:00
Receipt Date:	19930629
Manifest ID:	92263025
Trans EPA ID:	CAD059240713
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD008252405
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.418
Waste Quantity:	110
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported

TOYS R US (Continued) **S113045883**

Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2006
Gen EPA ID: CAL000062411

Shipment Date: 20061221
Creation Date: 4/19/2007 18:31:30
Receipt Date: 20070104
Manifest ID: 000159180SKS
Trans EPA ID: TXR000050930
Trans Name: SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD093459485
Trans Name: SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 214 - Unspecified solvent mixture
RCRA Code: Not reported
Meth Code: H020 - Solvents Recovery
Quantity Tons: 0.05
Waste Quantity: 100
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20061212
Creation Date: 4/19/2007 18:31:22
Receipt Date: 20061215
Manifest ID: 000089025FLE
Trans EPA ID: CAT080016116
Trans Name: NIETO AND SONS TRUCKING INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAT080013352
Trans Name: DEMENNO KERDOON
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 134 - Aqueous solution with <10% total organic residues
RCRA Code: Not reported
Meth Code: H135 - Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Quantity Tons: 0.924
Waste Quantity: 220
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

TOYS R US (Continued) **S113045883**

Shipment Date:	20060927
Creation Date:	4/19/2007 18:30:28
Receipt Date:	20061003
Manifest ID:	000447301JJK
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.95
Waste Quantity:	250
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20060626
Creation Date:	9/8/2006 18:31:20
Receipt Date:	20060626
Manifest ID:	25145951
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.76
Waste Quantity:	200
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20060428
Creation Date:	8/10/2006 18:35:36
Receipt Date:	20060428
Manifest ID:	25143624
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported

TOYS R US (Continued) **S113045883**

TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.3762
Waste Quantity:	114
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20060314
Creation Date:	12/21/2006 18:30:30
Receipt Date:	20060315
Manifest ID:	25144640
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	1.558
Waste Quantity:	410
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1998
Gen EPA ID:	CAL000062411
Shipment Date:	19980817
Creation Date:	11/2/1998 0:00:00
Receipt Date:	19980817
Manifest ID:	98033186
Trans EPA ID:	CAT080012800
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	241 - Tank bottom waste 251 Still bottoms with halogenated organics

TOYS R US (Continued) **S113045883**

RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.9174
Waste Quantity:	220
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19980812
Creation Date:	10/20/1998 0:00:00
Receipt Date:	19980813
Manifest ID:	98033110
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.38
Waste Quantity:	100
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19980812
Creation Date:	10/20/1998 0:00:00
Receipt Date:	19980813
Manifest ID:	98033110
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.63
Waste Quantity:	150
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

TOYS R US (Continued) **S113045883**

Additional Code 5:	Not reported
Shipment Date:	19980812
Creation Date:	10/20/1998 0:00:00
Receipt Date:	19980813
Manifest ID:	98033110
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19980812
Creation Date:	10/20/1998 0:00:00
Receipt Date:	19980817
Manifest ID:	98033109
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.018
Waste Quantity:	5
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19980629
Creation Date:	9/3/1998 0:00:00
Receipt Date:	19980630
Manifest ID:	97420740
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported

TOYS R US (Continued) **S113045883**

Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19980629
Creation Date:	9/15/1998 0:00:00
Receipt Date:	19980709
Manifest ID:	97420743
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19980629
Creation Date:	9/3/1998 0:00:00
Receipt Date:	19980630
Manifest ID:	97420740
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.627

TOYS R US (Continued) **S113045883**

Waste Quantity:	165
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19980330
Creation Date:	5/26/1998 0:00:00
Receipt Date:	19980331
Manifest ID:	97422358
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	241 - Tank bottom waste 251 Still bottoms with halogenated organics
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	5.004
Waste Quantity:	1200
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19980326
Creation Date:	6/16/1998 0:00:00
Receipt Date:	19980406
Manifest ID:	97422349
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD008252405
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.144
Waste Quantity:	40
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

TOYS R US (Continued) **S113045883**

Additional Info:

Year:	2000
Gen EPA ID:	CAL000062411
Shipment Date:	20001107
Creation Date:	1/9/2001 0:00:00
Receipt Date:	20001107
Manifest ID:	20498517
Trans EPA ID:	CAL000113451
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000113451
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.119
Waste Quantity:	35
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20000920
Creation Date:	12/8/2000 0:00:00
Receipt Date:	20000921
Manifest ID:	20052905
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	1.045
Waste Quantity:	275
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20000920
Creation Date:	12/8/2000 0:00:00
Receipt Date:	20001003
Manifest ID:	20052910
Trans EPA ID:	CAD982444481

TOYS R US (Continued) **S113045883**

Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD088504881
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	D002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.04
Waste Quantity:	80
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20000920
Creation Date:	12/8/2000 0:00:00
Receipt Date:	20000921
Manifest ID:	20052905
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20000920
Creation Date:	12/8/2000 0:00:00
Receipt Date:	20000921
Manifest ID:	20052905
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported

TOYS R US (Continued) **S113045883**

Meth Code:	R01 - Recycler
Quantity Tons:	0.374
Waste Quantity:	110
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20000714
Creation Date:	9/25/2000 0:00:00
Receipt Date:	20000717
Manifest ID:	20045330
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.627
Waste Quantity:	165
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20000616
Creation Date:	8/14/2000 0:00:00
Receipt Date:	20000616
Manifest ID:	20041437
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	241 - Tank bottom waste 251 Still bottoms with halogenated organics
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	3.336
Waste Quantity:	800
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

TOYS R US (Continued) **S113045883**

Shipment Date:	20000330
Creation Date:	5/30/2000 0:00:00
Receipt Date:	20000331
Manifest ID:	20052693
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	241 - Tank bottom waste 251 Still bottoms with halogenated organics
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	2.919
Waste Quantity:	700
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20000128
Creation Date:	4/4/2000 0:00:00
Receipt Date:	20000207
Manifest ID:	99569603
Trans EPA ID:	CAD982444481
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2010
Gen EPA ID:	CAL000062411

Shipment Date:	20101102
Creation Date:	1/12/2011 18:30:09
Receipt Date:	20101104
Manifest ID:	008035121JJK
Trans EPA ID:	CAD028277036

TOYS R US (Continued) **S113045883**

Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.02
Waste Quantity:	40
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101102
Creation Date:	1/3/2011 18:31:10
Receipt Date:	20101103
Manifest ID:	008035126JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101014
Creation Date:	3/3/2011 18:30:09
Receipt Date:	20101025
Manifest ID:	003726339FLE
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture

TOYS R US (Continued) **S113045883**

RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100803
Creation Date:	1/27/2011 18:30:23
Receipt Date:	20100816
Manifest ID:	003322436FLE
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT INC
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100802
Creation Date:	10/8/2010 18:30:19
Receipt Date:	20100805
Manifest ID:	007098113JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.06
Waste Quantity:	120
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

TOYS R US (Continued) **S113045883**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100802
Creation Date:	10/8/2010 18:30:19
Receipt Date:	20100805
Manifest ID:	007098113JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	141 - Off-specification, aged, or surplus inorganics
RCRA Code:	D002
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2085
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100802
Creation Date:	10/8/2010 18:30:19
Receipt Date:	20100805
Manifest ID:	007098113JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100802
Creation Date:	10/8/2010 18:30:19
Receipt Date:	20100805
Manifest ID:	007098113JJK

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Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.17
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100601
Creation Date:	1/14/2011 18:30:24
Receipt Date:	20100614
Manifest ID:	003322242FLE
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	OKD981588791
Trans 2 Name:	TRIAD TRANSPORT
TSDF EPA ID:	TXD077603371
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100505
Creation Date:	8/6/2010 18:31:29
Receipt Date:	20100512
Manifest ID:	007100149JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

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Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CIWQS:

Name:	TOYS R US
Address:	1110 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Agency:	Toys R Us
Agency Address:	1110 W Merrill Ave, Rialto, CA 92376
Place/Project Type:	Industrial - Miscellaneous Retail Stores, NEC
SIC/NAICS:	5999
Region:	8
Program:	INDSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	8 36I017324
NPDES Number:	CAS000001
Adoption Date:	01/01/1900
Effective Date:	06/27/2002
Termination Date:	05/16/2003
Expiration/Review Date:	01/01/1900
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	34.09229
Longitude:	-117.39246

Name:	TOYS R US
Address:	1110 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Agency:	Toys R Us
Agency Address:	1110 W Merrill Ave, Rialto, CA 92376
Place/Project Type:	Industrial - Local Trucking with Storage
SIC/NAICS:	4214
Region:	8
Program:	INDSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	8 36I017192
NPDES Number:	CAS000001
Adoption Date:	01/01/1900
Effective Date:	04/08/2002
Termination Date:	08/31/2018

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Expiration/Review Date:	01/01/1900
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	1
Violations within 5 years:	1
Latitude:	34.09229
Longitude:	-117.39246

CERS:

Name:	SM LOGISTICS RIALTO, LLC.
Address:	1110 W MERRILL AVE
City,State,Zip:	RIALTO, CA 92376
Site ID:	404209
CERS ID:	10045690
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	05-17-2019
Citation:	23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description:	Failure to have current UST Monitoring Plan available on site.
Violation Notes:	Returned to compliance on 08/30/2019. OBSERVATION: The monitoring plan onsite is not current and is not approved by the CUPA. CORRECTIVE ACTION: Update the required information in CERS and submit for review by the CUPA and maintain current copy on-site. Submit a signed Certificate of Compliance to this agency once this has been completed, within 30 days.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS

Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	08-30-2019
Citation:	23 CCR 16 2641(h) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(h)
Violation Description:	Failure to have an approved UST Monitoring Plan.
Violation Notes:	Returned to compliance on 12/23/2019. UST MONITORING PLAN IS DEFICIENT AS FOLLOWS: -UDC UTILIZES FLOAT/CHAIN NOT VR208 LIQUID SENSOR. -LINE LEAK DETECTOR IS RED JACKET AND NOT VMI LD2000 CORRECT ALL ABOVE DEFICIENCIES OF THE MONITORING PLAN IN CERS AND SUBMIT DOCUMENTATION OF COMPLIANCE TO THIS DEPARTMENT
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS

Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	05-17-2019
Citation:	23 CCR 16 2641(h) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(h)
Violation Description:	Failure to submit or maintain a current facility plot plan.
Violation Notes:	Returned to compliance on 08/30/2019. OBSERVATION: Owner/Operator did

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not maintain and submit a current facility plot plan. CORRECTIVE ACTION: Maintain and submit a current facility plot plan immediately via CERS and submit a current plot plan by March first of every year.

Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Violation Date: 05-17-2019
Citation: 23 CCR 16 2715(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(f)
Violation Description: Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes: Returned to compliance on 08/30/2019. OBSERVATION: The last monitoring certification was conducted on 08/24/2017, which is over 12 months ago. CORRECTIVE ACTION: The annual monitoring certification was conducted today while on-site. No further corrective action necessary. The next annual monitoring certification is due by 08/2019.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Violation Date: 05-17-2019
Citation: 23 CCR 16 2716(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2716(e)
Violation Description: For designated operator (DO) monthly inspections conducted before October 1, 2018, failure to comply with one or more of the following requirements: Be performed by an ICC certified DO. Inspect monthly alarm history report, check that alarms are documented and responded to appropriately, and attach a copy. Inspect for the presence of liquid/debris in spill containers. Inspect for the presence of liquid/debris in under dispenser containment (UDC) and ensure that the monitoring equipment is positioned correctly. Inspect for liquid or debris in containment sumps where an alarm occurred with no service visit. Check that all testing and maintenance has been completed and documented. Verify that all facility employees have been trained in accordance with 23 CCR 2715(c). For designated operator (DO) 30 day inspections conducted on and after October 1, 2018, failure to conduct the designated UST operator visual inspection at least once every 30 days.
Violation Notes: Returned to compliance on 08/30/2019. OBSERVATION: No Designated Operator (DO) inspections are being conducted at this site. PF services, the old companies DO has not completed a DO inspection since the old facility went out of business in September 2018. CORRECTIVE ACTION: Have a DO inspection completed by a certified DO every 30 days. Submit the next DO inspection report to this agency within 7 days.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 404209

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Site Name: SM Logistics Rialto, LLC.
Violation Date: 08-31-2015
Citation: HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description: Failure to submit an complete and accurate application for a permit to operate an underground storage tank, or for renewal of the permit.
Violation Notes: Returned to compliance on 10/13/2015. UST TANK FORM FOR 12K DIESEL TANK AS PART OF THE UST TANK APPLICATION DOES NOT INDICATE MECHANISM FOR OVERFILL PREVENTION USED. UPDATE THE TANK FORM FOR THE 12 K DIESEL TANK TO INDICATE THE METHOD OF OVERFILL PREVENTION ON LINE IN CERS WITHIN 30 DAYS.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Violation Date: 05-17-2019
Citation: 23 CCR 16 2715(a)(1)(B) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(a)(1)(B)
Violation Description: Failure to submit the G Designated Underground Storage Tank Operator Identification FormG within 30 days of installing a UST system or within 30 days of a change in DO.
Violation Notes: Returned to compliance on 08/30/2019. OBSERVATION: Owner/Operator did not submit the G Designated Underground Storage Tank Operator Identification FormG to the UPA within 30 days of obtaining or changing the DO. CORRECTIVE ACTION: Submit G Designated Underground Storage Tank Operator Identification FormG vis CERS within 30 days.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Violation Date: 05-17-2019
Citation: 23 CCR 16 2644.1(a)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2644.1(a)(2)
Violation Description: Failure to demonstrate to the UPA that the equipment and methods used to monitor the UST system are certified by an independent third-party as complying with the standards set forth in 23 CCR 2643(f).
Violation Notes: Returned to compliance on 08/30/2019. OBSERVATION: The line leak detector for the Diesel fuel tank could not be tested because there is not enough fuel in the tanks. CORRECTIVE ACTION: Once there is enough fuel in the tanks immediately test the line leak detector and submit results to this agency.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Violation Date: 05-17-2019
Citation: 23 CCR 16 2715(a)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(a)(2)
Violation Description: Failure to submit the G Underground Storage Tank Statement of Understanding and Compliance Form.G
Violation Notes: Returned to compliance on 08/27/2019. OBSERVATION: Owner/operator

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failed to submit the G Underground Storage Tank Statement of Understanding and Compliance FormG via CERS. CORRECTIVE ACTION: Submit the G Underground Storage Tank Statement of Understanding and Compliance FormG via CERS within 30 days and re-submit all UST documents.

Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Violation Date: 05-17-2019
Citation: 23 CCR 16 2715(c)(4) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(c)(4)
Violation Description: Failure to maintain a list of employees trained by the designated operator on-site or off-site at a readily available location, if approved by the UPA. For training that occurs on or after October 1, 2018, failure to maintain a copy of the "Facility Employee Training Certificate" on-site or off-site at a readily available location, if approved by the UPA.
Violation Notes: Returned to compliance on 08/30/2019. OBSERVATION: Designated Operator (DO) training is not being conducted for any employees. CORRECTIVE ACTION: Conduct DO training for all employees who are on-site or are affiliated with the UST system.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Violation Date: 04-15-2014
Citation: HSC 6.67 Multiple - California Health and Safety Code, Chapter 6.67, Section(s) Multiple
Violation Description: Haz Waste Generator Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 05/07/2014. Failure to obtain an EPA ID Number (CCR 66262.12(a)) COMPLIANCE DOCUMENTATION WAS RECEIVED ON 5/7/2014. CB
Violation Division: San Bernardino County Fire Department
Violation Program: HW
Violation Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Violation Date: 08-30-2019
Citation: HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes: Returned to compliance on 12/23/2019. UST EVIDENCE OF FINANCIAL RESPONSIBILITY FOR UST SYSTEM SUBMITTED ONLINE IN CERS IS NOT VALID. IMMEDIATELY OBTAIN A VALID EVIDENCE OF FINANCIAL RESPONSIBILITY FOR UST SYSTEM AND SUBMIT ON LINE IN CERS. SUBMIT DOCUMENTATION OF COMPLIANCE TO THIS DEPARTMENT UPON CORRECTION.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

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Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Violation Date: 08-24-2016
Citation: HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes: Returned to compliance on 09/08/2016. OBSERVED CERS REVIEW ELEMENTS INCOMPLETE AND OUTDATED. COMPLIANCE REQUIREMENT: UPDATE HAZARODUS MATERIALS INVENTORY TO INCLUDE UST GENERATED LIQUID HAZARDOUS WASTE. UPDATE INVENTORY SITE MAP TO INCLUDE INVENTORY LOCATIONS AND EVACUATION ROUTES AND STAGING AREA. UPDATE UST MONITORING PLAN TO REFLECT CORRECT MECHANICAL LINE LEAK DETECTOR AND AUTOMATIC TANK GAUGING EQUIPMENT. UPDATE UST SITE MAP TO REFLECT PIPING AND SENSOR LOCATIONS ON MAP, WORK WITH CONTRACTOR TO OBTAIN THIS INFORMATION. UPLOAD CURRENT CERTIFICATE OF FINANCIAL RESPONSIBILITY STATEMENT TO CERS. SUBMIT SIGNED CERTIFICATE OF COMPLIANCE WITHIN 30 DAYS. 10/17/16 CERS UPDATED ON 9/8/16. CFR current. PSAAVEDRA
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Violation Date: 08-30-2019
Citation: HSC 6.7 25284, 25286 - California Health and Safety Code, Chapter 6.7, Section(s) 25284, 25286
Violation Description: Failure to submit a complete and accurate application for a permit to operate a UST, or for renewal of the permit.
Violation Notes: Returned to compliance on 12/23/2019. UST TANK INFORMATION IS DEFICIENT AS FOLLOWS: -UST'S ARE MANUFACTURED BY JOOR AND NOT OWENS CORNING. -UST'S ARE DOUBLE WALLED STEEL AND NOT DOUBLE WALLED FIBERGLASS. -UDC IS MONITORED BY FLOAT/CHAIN AND NOT VR208 LIQUID SENSOR. UPDATE TANK INFORMATION/MONITORING PLAN ON LINE IN CERS ADDRESSING THE ABOVE DEFICIENCIES AND SUBMIT DOCUMENTATION OF COMPLIANCE TO THIS DEPARTMENT WITHIN 30 DAYS.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Violation Date: 05-17-2019
Citation: 23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)
Violation Description: Failure to comply with one or more of the following overfill prevention equipment requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. Install/retrofit overfill prevention

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equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1,- 2018. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. For USTs installed on and after October- 1,- 2018, perform an inspection at installation and every 36 months thereafter. Inspected within 30 days after a repair to the overfill prevention equipment. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Inspected by a certified UST service technician. Maintain records of overfill prevention equipment inspection for 36 months.

Violation Notes: Returned to compliance on 08/30/2019. OBSERVATION: The mechanical overfill prevention test has not been conducted. CORRECTIVE ACTION: Test the overfill prevention equipment to determine it is located at the proper height and is functional. Schedule the inspection with this agency and submit the test results to this agency within 30 days of testing.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Violation Date: 08-31-2015
Citation: HSC 6.7 29291(b) - California Health and Safety Code, Chapter 6.7, Section(s) 29291(b)
Violation Description: Failure of the UST system to be designed and constructed with a monitoring system capable of detecting the entry of the hazardous substance stored in the primary containment into the secondary containment.
Violation Notes: Returned to compliance on 10/13/2015. 12 K DIESEL SPILL BUCKET FAILED WHEN TESTED DUE TO A LEAK FROM A FILL ROTATOR ADAPTER. PER UST TECHNICIAN, THE ADAPTER WILL NEED TO BE REPLACED. REPLACE THE DAMAGED ADAPTER IMMEDIATELY AND RETEST SPILL BUCKET. SUBMIT TEST RESULT TO THIS DEPARTMENT WITHIN 30 DAYS.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Violation Date: 04-15-2014
Citation: HSC 6.95 25505(a) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)
Violation Description: Owner/Operator failed to complete and/or submit a Hazardous Materials Business Plan when storing hazardous materials at or above the thresholds quantities of 55 gallons/500 lbs/200 cubic feet.
Violation Notes: Returned to compliance on 04/25/2014. UPDATED BP SUBMITTED TO "CERS" SITE ON 4/25/2014. CB
Violation Division: San Bernardino County Fire Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Violation Date: 05-17-2019

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Citation:	23 CCR 16 2641(h) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(h)
Violation Description:	Failure to have an approved UST Monitoring Plan.
Violation Notes:	Returned to compliance on 08/30/2019. OBSERVATION: Facility does not have an approved Monitoring Plan and has not submitted one since January 2018. CORRECTIVE ACTION: Maintain an Approved Monitoring Plan and submit the monitoring immediately and every year after by March first.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	08-30-2019
Citation:	23 CCR 16 2712 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712
Violation Description:	Failure to comply with any of the applicable requirements of the permit issued for the operation of the UST system.
Violation Notes:	Returned to compliance on 12/23/2019. BOARD OF EQUALIZATION NUMBER SUBMITTED IN CERS IS NOT VALID FOR THIS SITE/UST OWNER. IMMEDIATELY OBTAIN APPROPRIATE BOARD OF EQUALIZATION NUMBER FOR THIS SITE AND SUBMIT ON LINE IN CERS. PROVIDE DOCUMENTATION OF COMPLIANCE TO THIS DEPARTMENT WITHIN 30 DAYS.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	05-17-2019
Citation:	23 CCR 16 2712(i), 2632(d)(2), 2634(e), 2641(h) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i), 2632(d)(2), 2634(e), 2641(h)
Violation Description:	Failure to submit a current UST Response Plan available on site.
Violation Notes:	Returned to compliance on 08/30/2019. OBSERVATION: Owner/Operator did not submit a current UST response plan. CORRECTIVE ACTION: Submit a current UST response plan to CERS within 30 days and re-submit all UST documents.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	12-30-2019
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to prepare a Spill Prevention, Control, and Countermeasures (SPCC) Plan.
Violation Notes:	Returned to compliance on 01/21/2020. This location has the following petroleum storad on site in above ground tanks which require a Spill Prevention Countermeasures and Control Plan (SPCC) - One (1) 1,000 Gallon AST for a back up generator - One (1) 350 Gallon AST for a fire pump house SM Logisitcs will be maintaining the site and will not be emptying the container per APSA SPCC regulations. An SPCC Plan is required. Prepare and implement and submit a Tier I SPCC Plan to this

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	Agency within sixty (60) days. Report emailed to Karen Hickey.
Violation Division:	San Bernardino County Fire Department
Violation Program:	APSA
Violation Source:	CERS
Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	08-24-2017
Citation:	23 CCR 6.7 25284, 25286 - California Code of Regulations, Title 23, Chapter 6.7, Section(s) 25284, 25286
Violation Description:	Failure to submit a complete and accurate application for a permit to operate a UST, or for renewal of the permit.
Violation Notes:	Returned to compliance on 12/17/2019. UST TANK INFORMATION AS PART OF THE UST PERMIT APPLICATION ON LINE IN THE CALIFORNIA ENVIRONMENTAL REPORTING SYSTEM (CERS) FAILED TO INCLUDE TANK INSTALLATION DATE FOR TANK #1 (12K DIESEL TANK). IMMEDIATLEY UPDATE TANK INFORMATION FOR TANK ID#1 TO INCLUDE TANK INSTALLATION DATE AND SUBMIT DOCUMETATION OF COMPLIANCE TO THIS DEPARTMENT WITHIN 30 DAYS. RECIEVED PHONE CALL FROM RICH FRYE REGARDING QUESTIONS ON COMPLIANCE. DISCUSSED WITH MR. FRYE OF THE REQUIREMENTS. 2/9/2018 ASAGUAN
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	05-17-2019
Citation:	HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description:	Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes:	Returned to compliance on 08/30/2019. OBSERVATION: Financial responsibility documents have not been submitted to the CUPA. Current financial responsibility documents are required to be submitted annually. CORRECTIVE ACTION: Complete and submit a copy of the financial responsibility via CERS and re-submit all UST documents within 30 days.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	08-30-2019
Citation:	HSC 6.7 25290.1(c),25290.2(c),25291(a)(2),2529.1(e) - California Health and Safety Code, Chapter 6.7, Section(s) 25290.1(c),25290.2(c),25291(a)(2),2529.1(e)
Violation Description:	Failure to maintain secondary containment (e.g., failure of secondary containment testing).
Violation Notes:	Returned to compliance on 10/07/2019. THE FOLLOWING SECONDARY CONTAINMENT FAILURES WERE NOTED DURING INSPECTION: -UDC -SUPPLY PRODUCT SECONDARY PIPING -GENERATOR PIPING SUMP REPAIR CAUSE OF FAILURES IMMEDIATELY AND SCHEDULE A WITNESSED RETEST WITH THIS DEPARTMENT WITHIN 30 DAYS. NOTE: CONTACT THIS DEPARTMENT FOR APPROVAL PRIOR TO ANY REPAIRS REQUIRING PERMITS.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST

TOYS R US (Continued) **S113045883**

Violation Source:	CERS
Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	09-05-2014
Citation:	HSC 6.7 25291 - California Health and Safety Code, Chapter 6.7, Section(s) 25291
Violation Description:	Failure to maintain under-dispenser containment, sumps, and/or other secondary containment in good condition and/or free of debris/liquid.
Violation Notes:	Returned to compliance on 09/05/2014. OBSERVATION: Observed liquid in the Fuel Island's Turbine Sump. COMPLIANCE MET SITE: Technician removed liquid from the Turbine Sump.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	01-11-2019
Citation:	23 CCR 16 2715(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(f)
Violation Description:	Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes:	Returned to compliance on 08/30/2019. OBSERVATION: The 12 month monitoring certification has not been conducted since 08/24/2017, which is over 12 months ago. CORRECTIVE ACTION: Conduct annual monitoring certification immediately and schedule with this agency for the testing.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	05-17-2019
Citation:	23 CCR 16 2712(b)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(2)
Violation Description:	Failure to maintain monitoring records for release detection and/or maintain records of appropriate follow-up actions.
Violation Notes:	Returned to compliance on 12/30/2019. OBSERVATION: Owner/Operator failed to maintain monitoring records for release detection (e.g., alarm logs) and/or maintain records of appropriate follow-up actions. An alarm occurred for the Backup generator tank on 01/09/2019 and no maintenance records were found for what cleared the alarm. CORRECTIVE ACTION: Maintain monitoring records for release detection (e.g., alarm logs) and maintain records of appropriate follow-up actions.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	05-17-2019
Citation:	23 CCR 16 2712(b)(1)(F) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(F)

TOYS R US (Continued) **S113045883**

Violation Description:	"Failure to conduct secondary containment testing, or one or more of the following requirements: Perform the test of the secondary containment system upon installation, within six months of installation and every 36 months thereafter. Perform the test of a secondary containment component within 30 days of a repair or discontinuing vacuum, pressure or hydrostatic monitoring. Use a procedure that demonstrates the system works as well as at installation. Use applicable manufacturer guidelines, industry codes, engineering standard, or professional engineer approval. Performed by a certified service technician. Maintain records of secondary containment testing for 36 months."
Violation Notes:	Returned to compliance on 08/30/2019. OBSERVATION: Secondary containment testing was last performed on 0413/2016 and was due by 04/2019. Testing has not been completed and is 1 month past due. Secondary containment testing is required once every 36 months. CORRECTIVE ACTION: Immediately schedule this test and provide 48 hours notification to the CUPA.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	08-31-2015
Citation:	Un-Specified
Violation Description:	UST Program - Administration/Documentation - For use of Local Ordinance only
Violation Notes:	Returned to compliance on 10/13/2015. Failure to submit a signed Designated UST Operator Statement (23 CCR 2715(a)) UST DESIGNATED OPERATOR STATEMENT SUBMITTED ON LINE IN CERS IS INCOMPLETE MISSING DATE AND SIGNATURE. UPDATE UST DESIGNATED OPERATOR STATEMENT ADDRESSING THE PREVIOUSLY NOTED DEFICIENCY AND SUBMIT COMPLETED UST DESIGNATED OPERATOR STATEMENT ON LINE IN CERS WITHIN 30 DAYS.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	08-30-2019
Citation:	23 CCR 16 2716(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2716(f)
Violation Description:	"Failure to maintain on-site, or off-site at a readily available location if approved by the UPA, copies of Designated Operator inspection records as follows: Designated operator monthly inspection records for inspections performed before October 1, 2018 must be kept for 12 months from the month of inspection. For inspections performed on or after October 1, 2018, copies of the ""Designated Underground Storage Tank Operator Visual Inspection Report"" must be kept for 36 months from the month of inspection. "
Violation Notes:	Returned to compliance on 12/30/2019. NO RECORDS OF DESIGNATED OPERATOR MONTHLY INSPECTIONS WERE AVAILABLE DURING INSPECTION. COMPLETE A WORK PLAN AS TO HOW DESIGNATED OPERATOR MONTHLY INSPECTION REPORTS ARE TO BE MADE AVAILABLE AND SUBMIT COPY TO THIS DEPARTMENT FOR REVIEW WITHIN 30 DAYS.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST

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Violation Source:	CERS
Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	08-24-2017
Citation:	HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description:	Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes:	Returned to compliance on 12/17/2019. CHIEF FINANCIAL OFFICER (CFO) LETTER DATED 2/17/2014 SUBMITTED ON LINE CERS IS NOT CURRENT AND NEEDS TO BE UPDATED. CFO LETTER MUST BE REVIEWED AND UPDATED ANNUALLY BY FACILITY CFO. UPDATE CFO LETTER AND SUBMIT COPY ON LINE IN CERS WITHIN 30 DAYS. RECIEVED PHONE CALL FROM RICH FRYE REGARDING QUESTIONS ON COMPLIANCE. DISCUSSED WITH MR. FRYE OF THE REQUIREMENTS. 2/9/2018 ASAGUAN
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	05-17-2019
Citation:	HSC 6.7 25284, 25286 - California Health and Safety Code, Chapter 6.7, Section(s) 25284, 25286
Violation Description:	Failure to submit a complete and accurate application for a permit to operate a UST, or for renewal of the permit.
Violation Notes:	Returned to compliance on 08/30/2019. OBSERVATION: Owner/Operator did not submit and maintain a complete and accurate UST Operating Permit Application. CORRECTIVE ACTION: Submit and maintain a complete and accurate UST Operating Permit Application, including for permit renewal.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	05-17-2019
Citation:	23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description:	Failure to retain a copy of the permit to operate at the facility.
Violation Notes:	Returned to compliance on 08/30/2019. OBSERVATION: Owner/Operator did not retain a copy of the permit to operate at the facility. CORRECTIVE ACTION: Retain a copy of the permit to operate at the facility and submit a signed copy of the Certificate of Compliance (CoC) stating that the permit is not being maintained on-site within 30 days.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	404209
Site Name:	SM Logistics Rialto, LLC.
Violation Date:	05-17-2019
Citation:	23 CCR 16 2716(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2716(f)
Violation Description:	"Failure to maintain on-site, or off-site at a readily available

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location if approved by the UPA, copies of Designated Operator inspection records as follows: Designated operator monthly inspection records for inspections performed before October 1, 2018 must be kept for 12 months from the month of inspection. For inspections performed on or after October 1, 2018, copies of the ""Designated Underground Storage Tank Operator Visual Inspection Report"" must be kept for 36 months from the month of inspection. "

Violation Notes: Returned to compliance on 08/30/2019. OBSERVATION: There is no Designated Operator (DO) inspections maintained on-site. CORRECTIVE ACTION: Maintain DO inspection reports on-site to be readily available for inspections.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Violation Date: 08-24-2016
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description: Failure to have a UST Response Plan available on site.
Violation Notes: Returned to compliance on 09/08/2016. OBSERVED CERS REVIEW ELEMENTS INCOMPLETE AND OUTDATED. COMPLIANCE REQUIREMENT: UPDATE HAZARODUS MATERIALS INVENTORY TO INCLUDE UST GENERATED LIQUID HAZARDOUS WASTE. UPDATE INVENTORY SITE MAP TO INCLUDE INVENTORY LOCATIONS AND EVACUATION ROUTES AND STAGING AREA. UPDATE UST MONITORING PLAN TO REFLECT CORRECT MECHANICAL LINE LEAK DETECTOR AND AUTOMATIC TANK GAUGING EQUIPMENT. UPDATE UST SITE MAP TO REFLECT PIPING AND SENSOR LOCATIONS ON MAP, WORK WITH CONTRACTOR TO OBTAIN THIS INFORMATION. UPLOAD CURRENT CERTIFICATE OF FINANCIAL RESPONSIBILITY STATEMENT TO CERS. SUBMIT SIGNED CERTIFICATE OF COMPLIANCE WITHIN 30 DAYS. 10/17/16 CERS UPDATED ON 9/8/16. VIOLATIONS CORRECTED. PSAAVEDRA
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Violation Date: 08-24-2016
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 09/08/2016. OBSERVED CERS REVIEW ELEMENTS INCOMPLETE AND OUTDATED. COMPLIANCE REQUIREMENT: UPDATE HAZARODUS MATERIALS INVENTORY TO INCLUDE UST GENERATED LIQUID HAZARDOUS WASTE. UPDATE INVENTORY SITE MAP TO INCLUDE INVENTORY LOCATIONS AND EVACUATION ROUTES AND STAGING AREA. UPDATE UST MONITORING PLAN TO REFLECT CORRECT MECHANICAL LINE LEAK DETECTOR AND AUTOMATIC TANK GAUGING EQUIPMENT. UPDATE UST SITE MAP TO REFLECT PIPING AND SENSOR LOCATIONS ON MAP, WORK WITH CONTRACTOR TO OBTAIN THIS INFORMATION. UPLOAD CURRENT CERTIFICATE OF FINANCIAL RESPONSIBILITY STATEMENT TO CERS. SUBMIT SIGNED CERTIFICATE OF COMPLIANCE WITHIN 30 DAYS. 10/17/16 CERS UPDATED ON 9/8/16. VIOLATIONS CORRECTED. PSAAVEDRA
Violation Division: San Bernardino County Fire Department
Violation Program: HMRRP

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Violation Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Violation Date: 08-31-2015
Citation: Un-Specified
Violation Description: UST Program - Administration/Documentation - For use of Local Ordinance only
Violation Notes: Returned to compliance on 10/13/2015. Failure to have a written monitoring program with monitoring procedures and response plan. (CCR 2632(d)) UST MONITORING PLAN FOR 12K DIESEL TANK INDICATES THE USE OF VEEDER ROOT 208 SENSOR FOR ANNULAR MONITORING WHERE A VEEDER ROOT 420 WAS OBSERVED. UPDATE UST MONITORING PLAN ADDRESSING THE PREVIOUSLY NOTED DISCREPANCY ON LINE IN CERS WITHIN 30 DAYS.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 01-11-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-15-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: REGULAR INSPECTION. CURTIS BRUNDAGE WAS A RIDE ALONG OBSERVER.
Eval Division: San Bernardino County Fire Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-15-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: REGULAR INSPECTION. CURTIS BRUNDAGE WAS A RIDE ALONG OBSERVER.
Eval Division: San Bernardino County Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-15-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: REGULAR INSPECTION. CURTIS BRUNDAGE WAS A RIDE ALONG OBSERVER.
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-17-2019

TOYS R US (Continued) **S113045883**

Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	San Bernardino County Fire Department
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-10-2020
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	ANNUAL UST INSPECTION
Eval Division:	San Bernardino County Fire Department
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-24-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	ANNUAL UST INSPECTION AND CERS REVIEW
Eval Division:	San Bernardino County Fire Department
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-24-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	HAZMAT HANDLER INSPECTION UST
Eval Division:	San Bernardino County Fire Department
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-24-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	UST ANNUAL INSPECTION WITH MONITORING SYSTEM CERTIFICATION.
Eval Division:	San Bernardino County Fire Department
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-30-2019
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	UST 3 YEAR OVERFILL INSPECTION COMPLETED WITH UST MONITORING SYSTEM CERTIFICATION. SEE C01 FOR INSPECTION INFORMATION AND NARRATIVE.
Eval Division:	San Bernardino County Fire Department
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-30-2019
Violations Found:	No
Eval Type:	Other, not routine, done by local agency

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Eval Notes:	UST SECONDARY CONTAINMENT TESTING COMPLETED WITH ANNUAL MONITORING SYSTEM CERTIFICATION. SEE C01 FOR INSPECTION INFORMATION AND NARRATIVE.
Eval Division:	San Bernardino County Fire Department
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-30-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	UST ANNUAL INSPECTION WITH MONITORING SYSTEM CERTIFICAITON.
Eval Division:	San Bernardino County Fire Department
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-31-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	UST ANNUAL INSPECTION WITH MONITORING SYSTEM CERTIFICATION
Eval Division:	San Bernardino County Fire Department
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-05-2014
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	TOYS UR US- UST MONITORING CERTIFICATION- (FUEL ISLAND-PRESSURE SYSTEM & BACK-UP GENERATOR-SUCTION SYSTEM)
Eval Division:	San Bernardino County Fire Department
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-06-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	UST FIELD INSPECTION-ANNUAL MONITORING SYSTEM (2 TANKS W/2 MONITORING SYSTEMS) W/BILL COULTURE
Eval Division:	San Bernardino County Fire Department
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-22-2020
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	INSPECTION WITH NEW TENANT RIALTO SHIPPING
Eval Division:	San Bernardino County Fire Department
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-22-2020
Violations Found:	No

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Eval Type:	Other, not routine, done by local agency
Eval Notes:	INSPECTION WITH NEW TENANT RIALTO SHIPPING
Eval Division:	San Bernardino County Fire Department
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-22-2020
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	INSPECTION WITH NEW TENANT RIALTO SHIPPING
Eval Division:	San Bernardino County Fire Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-22-2020
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	INSPECTION WITH NEW TENANT RIALTO SHIPPING
Eval Division:	San Bernardino County Fire Department
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-07-2019
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	RE-INSPECTION TO FOLLOW UP ON SB989 REPAIRS.
Eval Division:	San Bernardino County Fire Department
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-13-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	FOLLOW UP INSPECTION
Eval Division:	San Bernardino County Fire Department
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-13-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	HMBEP HAZ WASTE APSA INSPECTIONS
Eval Division:	San Bernardino County Fire Department
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-13-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	HMBEP HAZ WASTE APSA INSPECTIONS
Eval Division:	San Bernardino County Fire Department

TOYS R US (Continued) **S113045883**

Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-13-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: HMBEP HAZ WASTE APSA INSPECTIONS
Eval Division: San Bernardino County Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-30-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: APSA SPCC VIOLATION ISSUED - SPCC required and tanks will not be emptied. Violation issued.
Eval Division: San Bernardino County Fire Department
Eval Program: APSA
Eval Source: CERS

Enforcement Action:
Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Site Address: 1110 W MERRILL AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 04-15-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Site Address: 1110 W MERRILL AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 04-15-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Site Address: 1110 W MERRILL AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 08-24-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection

TOYS R US (Continued) **S113045883**

Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Site Address: 1110 W MERRILL AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 08-24-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Site Address: 1110 W MERRILL AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 08-31-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 404209
Site Name: SM Logistics Rialto, LLC.
Site Address: 1110 W MERRILL AVE
Site City: RIALTO
Site Zip: 92376
Enf Action Date: 09-05-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: UST
Enf Action Source: CERS

Coordinates:
Site ID: 404209
Facility Name: SM Logistics Rialto, LLC.
Env Int Type Code: HMBP
Program ID: 10045690
Coord Name: Not reported
Ref Point Type Desc: Unknown
Latitude: 34.094246
Longitude: -117.391907

Affiliation:
Affiliation Type Desc: Identification Signer

TOYS R US (Continued) **S113045883**

Entity Name:	Karen Hickey
Entity Title:	COO, Authorized Agency for SM Logistics, LLC
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Tank Operator
Entity Name:	McDonald Property Group
Entity Title:	Not reported
Affiliation Address:	1140 N Coast Highway
Affiliation City:	Laguna Beach
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92651-1342
Affiliation Phone:	(949) 655-8229
Affiliation Type Desc:	CUPA District
Entity Name:	San Bernardino County Fire
Entity Title:	Not reported
Affiliation Address:	620 South E Street
Affiliation City:	San Bernardino
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92415-0153
Affiliation Phone:	(909) 386-8401
Affiliation Type Desc:	Document Preparer
Entity Name:	Brenda Puepke
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	1140 N Coast Hwy. c/o - McDonald Property Group
Affiliation City:	Laguna Beach
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92651-1342
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	SM Logistics, LLC
Entity Title:	Not reported
Affiliation Address:	350 Park Avenue, 15th Floor
Affiliation City:	New York
Affiliation State:	NY
Affiliation Country:	United States
Affiliation Zip:	1002-5910

TOYS R US (Continued) **S113045883**

Affiliation Phone: (212) 271-4393

Affiliation Type Desc: Environmental Contact
Entity Name: BRENDA PUEPKE
Entity Title: Not reported
Affiliation Address: PO Box 80777
Affiliation City: Rancho Santa Margarita
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92688
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: SM Logistics Rialto
Entity Title: Not reported
Affiliation Address: 350 Park Ave. 15th Floor
Affiliation City: New York
Affiliation State: NY
Affiliation Country: United States
Affiliation Zip: 10022-5910
Affiliation Phone: (212) 271-4393

Affiliation Type Desc: Operator
Entity Name: SM Logistics Rialto, LLC
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (949) 655-8229

Affiliation Type Desc: Parent Corporation
Entity Name: SM Logistics Rialto, LLC
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: SM Logistics Rialto, LLC.
Entity Title: Not reported
Affiliation Address: 350 Park Ave., 15th Floor
Affiliation City: New York
Affiliation State: NY
Affiliation Country: United States
Affiliation Zip: 10022-5910
Affiliation Phone: (212) 271-4393

Affiliation Type Desc: UST Tank Owner
Entity Name: SM Logistics Rialto, LLC.
Entity Title: Not reported
Affiliation Address: 350 Park Avenue, 15th Floor
Affiliation City: New York

TOYS R US (Continued) **S113045883**

Affiliation State: NY
Affiliation Country: United States
Affiliation Zip: 10022-5910
Affiliation Phone: (212) 271-4393

HWTS:
Name: TOYS R US
Address: 1110 W MERRILL AVE
Address 2: Not reported
City,State,Zip: RIALTO, CA 923760000
EPA ID: CAL000062411
Inactive Date: Not reported
Create Date: 03/11/1992
Last Act Date: 07/14/2017
Mailing Name: Not reported
Mailing Address: 1110 W MERRILL AVE
Mailing Address 2: Not reported
Mailing City,State,Zip: RIALTO, CA 923769108
Owner Name: TOYS R US
Owner Address: 1 GEOFFREY WAY
Owner Address 2: Not reported
Owner City,State,Zip: WAYNE, NJ 074702030
Contact Name: JERRY KEATING/FACILITIES MGR
Contact Address: 1110 W MERRIL AVE
Contact Address 2: Not reported
City,State,Zip: RIALTO, CA 92376

NAICS:
EPA ID: CAL000062411
Create Date: 2002-03-14 16:36:27.000
NAICS Code: 45112
NAICS Description: Hobby, Toy, and Game Stores
Issued EPA ID Date: 1992-03-11 00:00:00
Inactive Date: Not reported
Facility Name: TOYS R US
Facility Address: 1110 W MERRILL AVE
Facility Address 2: Not reported
Facility City: RIALTO
Facility County: Not reported
Facility State: CA
Facility Zip: 923760000

H42 **MIDDLE SCHOOL NO. 6, OPTION NO. 1** **ENVIROSTOR** **S106568120**
NNW **CEDAR AVENUE/WEST RIALTO AVENUE** **SCH** **N/A**
1/8-1/4 **RIALTO, CA 92376**
0.239 mi.
1263 ft. **Site 3 of 4 in cluster H**

Relative:
Higher

Actual:
1257 ft.

ENVIROSTOR:
Name: MIDDLE SCHOOL NO. 6, OPTION NO. 1
Address: CEDAR AVENUE/WEST RIALTO AVENUE
City,State,Zip: RIALTO, CA 92376
Facility ID: 36010057
Status: No Further Action
Status Date: 02/23/2006
Site Code: 404519

MIDDLE SCHOOL NO. 6, OPTION NO. 1 (Continued) **S106568120**

Site Type:	School Investigation
Site Type Detailed:	School
Acres:	19.5
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Amit Pathak
Supervisor:	Shahir Haddad
Division Branch:	Southern California Schools & Brownfields Outreach
Assembly:	47
Senate:	20
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	34.10017
Longitude:	-117.3923
APN:	0128-061-12, 0128-061-16, 0128-061-47
Past Use:	AGRICULTURAL - ROW CROPS, VEHICLE MAINTENANCE
Potential COC:	Arsenic Benzene DDD DDE DDT TPH-gas TPH-MOTOR OIL Trichloroethylene (TCE Vinyl chloride Ethylbenzene Polynuclear aromatic hydrocarbons (PAHs
Confirmed COC:	NONE SPECIFIED
Potential Description:	NMA
Alias Name:	MIDDLE SCHOOL NO. 6, OPTION NO. 1
Alias Type:	Alternate Name
Alias Name:	RIALTO UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	RIALTO USD-MIDDLE SCHOOL #6, OPTION #1
Alias Type:	Alternate Name
Alias Name:	0128-061-12
Alias Type:	APN
Alias Name:	0128-061-16
Alias Type:	APN
Alias Name:	0128-061-47
Alias Type:	APN
Alias Name:	404519
Alias Type:	Project Code (Site Code)
Alias Name:	36010057
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1
Completed Date:	03/03/2004
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Workplan
Completed Date:	07/15/2005
Comments:	Accepted
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	12/16/2005

MIDDLE SCHOOL NO. 6, OPTION NO. 1 (Continued) **S106568120**

Comments: NFA

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 01/31/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 04/23/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 04/26/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 01/06/2005
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: MIDDLE SCHOOL NO. 6, OPTION NO. 1
Address: CEDAR AVENUE/WEST RIALTO AVENUE
City,State,Zip: RIALTO, CA 92376
Facility ID: 36010057
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 19.5
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Amit Pathak
Supervisor: Shahir Haddad
Division Branch: Southern California Schools & Brownfields Outreach
Site Code: 404519
Assembly: 47
Senate: 20
Special Program Status: Not reported

MIDDLE SCHOOL NO. 6, OPTION NO. 1 (Continued) **S106568120**

Status:	No Further Action
Status Date:	02/23/2006
Restricted Use:	NO
Funding:	School District
Latitude:	34.10017
Longitude:	-117.3923
APN:	0128-061-12, 0128-061-16, 0128-061-47
Past Use:	AGRICULTURAL - ROW CROPS, VEHICLE MAINTENANCE
Potential COC:	Arsenic, Benzene, DDD, DDE, DDT, TPH-gas, TPH-MOTOR OIL, Trichloroethylene (TCE, Vinyl chloride, Ethylbenzene, Polynuclear aromatic hydrocarbons (PAHs
Confirmed COC:	NONE SPECIFIED
Potential Description:	NMA
Alias Name:	MIDDLE SCHOOL NO. 6, OPTION NO. 1
Alias Type:	Alternate Name
Alias Name:	RIALTO UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	RIALTO USD-MIDDLE SCHOOL #6, OPTION #1
Alias Type:	Alternate Name
Alias Name:	0128-061-12
Alias Type:	APN
Alias Name:	0128-061-16
Alias Type:	APN
Alias Name:	0128-061-47
Alias Type:	APN
Alias Name:	404519
Alias Type:	Project Code (Site Code)
Alias Name:	36010057
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1
Completed Date:	03/03/2004
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Workplan
Completed Date:	07/15/2005
Comments:	Accepted
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	12/16/2005
Comments:	NFA
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	01/31/2006
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Inspections/Visit (Non LUR)

MIDDLE SCHOOL NO. 6, OPTION NO. 1 (Continued) **S106568120**

Completed Date:	04/23/2004
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Environmental Oversight Agreement
Completed Date:	04/26/2004
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Inspections/Visit (Non LUR)
Completed Date:	01/06/2005
Comments:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

H43 **ELEMENTARY SCHOOL NO. 18, OPTION NO. 5** **ENVIROSTOR** **S106568119**
NNW **CEDAR AVENUE/WEST RIALTO AVENUE** **SCH** **N/A**
1/8-1/4 **RIALTO, CA 92376**
0.239 mi.
1263 ft. **Site 4 of 4 in cluster H**

Relative: **Higher**
Actual: **1257 ft.**

ENVIROSTOR:

Name:	ELEMENTARY SCHOOL NO. 18, OPTION NO. 5
Address:	CEDAR AVENUE/WEST RIALTO AVENUE
City,State,Zip:	RIALTO, CA 92376
Facility ID:	36010056
Status:	No Further Action
Status Date:	04/26/2004
Site Code:	404518
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	15.5
NPL:	NO
Regulatory Agencies:	DTSC
Lead Agency:	DTSC
Program Manager:	Not reported
Supervisor:	Shahir Haddad
Division Branch:	Southern California Schools & Brownfields Outreach
Assembly:	47
Senate:	20
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	34.10045
Longitude:	-117.3916
APN:	NONE SPECIFIED
Past Use:	AGRICULTURAL - ROW CROPS

ELEMENTARY SCHOOL NO. 18, OPTION NO. 5 (Continued) **S106568119**

Potential COC: NONE SPECIFIED No Contaminants found
Confirmed COC: 31000-NO
Potential Description: SOIL
Alias Name: ELEMENTARY SCHOOL NO. 18, OPTION NO. 5
Alias Type: Alternate Name
Alias Name: RIALTO UNIFIED SCHOOL DISTRICT
Alias Type: Alternate Name
Alias Name: RIALTO USD-ELEM SCHOOL # 18, OPTION # 5
Alias Type: Alternate Name
Alias Name: 404518
Alias Type: Project Code (Site Code)
Alias Name: 36010056
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 05/23/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 03/03/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 02/08/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 04/26/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 06/10/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 04/23/2004
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported

ELEMENTARY SCHOOL NO. 18, OPTION NO. 5 (Continued) **S106568119**

Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: ELEMENTARY SCHOOL NO. 18, OPTION NO. 5
Address: CEDAR AVENUE/WEST RIALTO AVENUE
City,State,Zip: RIALTO, CA 92376
Facility ID: 36010056
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 15.5
National Priorities List: NO
Cleanup Oversight Agencies: DTSC
Lead Agency: DTSC
Lead Agency Description: * DTSC
Project Manager: Not reported
Supervisor: Shahir Haddad
Division Branch: Southern California Schools & Brownfields Outreach
Site Code: 404518
Assembly: 47
Senate: 20
Special Program Status: Not reported
Status: No Further Action
Status Date: 04/26/2004
Restricted Use: NO
Funding: School District
Latitude: 34.10045
Longitude: -117.3916
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - ROW CROPS
Potential COC: NONE SPECIFIED, No Contaminants found
Confirmed COC: 31000-NO
Potential Description: SOIL
Alias Name: ELEMENTARY SCHOOL NO. 18, OPTION NO. 5
Alias Type: Alternate Name
Alias Name: RIALTO UNIFIED SCHOOL DISTRICT
Alias Type: Alternate Name
Alias Name: RIALTO USD-ELEM SCHOOL # 18, OPTION # 5
Alias Type: Alternate Name
Alias Name: 404518
Alias Type: Project Code (Site Code)
Alias Name: 36010056
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 05/23/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 03/03/2004

ELEMENTARY SCHOOL NO. 18, OPTION NO. 5 (Continued) **S106568119**

Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 02/08/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 04/26/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 06/10/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 04/23/2004
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

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44 North 1/8-1/4 0.242 mi. 1277 ft.

RIALTO USD - RIALTO MIDDLE SCHOOL
1262 W. RIALTO AVE
RIALTO, CA 92376

RCRA NonGen / NLR **1024863758**
CAL000432308

Relative: Higher

Actual: 1255 ft.

RCRA NonGen / NLR:

Date Form Received by Agency:	2017-11-22 00:00:00.0
Handler Name:	RIALTO USD - RIALTO MIDDLE SCHOOL
Handler Address:	1262 W. RIALTO AVE
Handler City,State,Zip:	RIALTO, CA 92376
EPA ID:	CAL000432308
Contact Name:	LESLIE ALEXANDER
Contact Address:	625 W. RIALTO AVE
Contact City,State,Zip:	RIALTO, CA 92376
Contact Telephone:	909-820-7863
Contact Fax:	909-874-9104
Contact Email:	LALEXAND@RIALTO.K12.CA.US
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified

RIALTO USD - RIALTO MIDDLE SCHOOL (Continued) **1024863758**

Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	625 W. RIALTO AVE
Mailing City,State,Zip:	RIALTO, CA 92376
Owner Name:	RIALTO UNIFIED SCHOOL DISTRICT
Owner Type:	Other
Operator Name:	LESLIE ALEXANDER
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No

RIALTO USD - RIALTO MIDDLE SCHOOL (Continued) **1024863758**

Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-09-07 19:37:03.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	RIALTO UNIFIED SCHOOL DISTRICT
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	182 E. WALNUT AVE
Owner/Operator City,State,Zip:	RIALTO, CA 92376
Owner/Operator Telephone:	909-879-8610
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	LESLIE ALEXANDER
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	625 W. RIALTO AVE
Owner/Operator City,State,Zip:	RIALTO, CA 92376
Owner/Operator Telephone:	909-820-7863
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2017-11-22 00:00:00.0
Handler Name:	RIALTO USD - RIALTO MIDDLE SCHOOL
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	611110
NAICS Description:	ELEMENTARY AND SECONDARY SCHOOLS

RIALTO USD - RIALTO MIDDLE SCHOOL (Continued) **1024863758**

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

J45 **JONES SAW SERVICE, INC.** **San Bern. Co. Permit** **S102041422**
NNE **1111 W RIALTO AVE E** **N/A**
1/8-1/4 **RIALTO, CA 92376**
0.244 mi.
1288 ft. **Site 1 of 2 in cluster J**

Relative:
Higher

Actual:
1250 ft.

San Bern. Co. Permit:
Name: JONES SAW SERVICE, INC.
Address: 1111 W RIALTO AVE E
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0004172
Owner: JONES SAW SERVICE INC
Permit Number: PT0004909
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 04/30/2010

J46 **VERIZON WIRELESS: AMBASSADOR** **San Bern. Co. Permit** **S106230228**
NNE **1132 W RIALTO AVE** **CERS** **N/A**
1/8-1/4 **RIALTO, CA 92376**
0.245 mi.
1294 ft. **Site 2 of 2 in cluster J**

Relative:
Higher

Actual:
1251 ft.

San Bern. Co. Permit:
Name: VERIZON WIRELESS: AMBASSADOR
Address: 1132 W RIALTO AVE
City,State,Zip: RIALTO, CA 92376
Region: SAN BERNARDINO
Facility ID: FA0008066
Owner: Verizon Wireless
Permit Number: PT0014166
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: ACTIVE
Expiration Date: 02/28/2021

CERS:
Name: VERIZON WIRELESS: AMBASSADOR
Address: 1132 WEST RIALTO AVE.
City,State,Zip: RIALTO, CA 92376
Site ID: 167681
CERS ID: 10161007
CERS Description: Chemical Storage Facilities

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-04-2015
Violations Found: No

VERIZON WIRELESS: AMBASSADOR (Continued) **S106230228**

Eval Type: Routine done by local agency
Eval Notes: REGULAR INSPECTION.
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-18-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: Environmental Compliance
Entity Title: Not reported
Affiliation Address: 15505 Sand Canyon Avenue, MS D-104
Affiliation City: Irvine
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92618
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Wilson Rodriguez
Entity Title: Engr III Spec-RE/Regulatory
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Verizon Wireless
Entity Title: Not reported
Affiliation Address: 15505 Sand Canyon Avenue, MS D-104
Affiliation City: Irvine
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92618
Affiliation Phone: (949) 286-7000

Affiliation Type Desc: Parent Corporation
Entity Name: Verizon Wireless [Southern California]
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District

VERIZON WIRELESS: AMBASSADOR (Continued) **S106230228**

Entity Name:	San Bernardino County Fire
Entity Title:	Not reported
Affiliation Address:	620 South E Street
Affiliation City:	San Bernardino
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92415-0153
Affiliation Phone:	(909) 386-8401
Affiliation Type Desc:	Document Preparer
Entity Name:	Steve Skanderson, Stantec
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Verizon Wireless
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 286-7000
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	15505 Sand Canyon Avenue, MS D-104
Affiliation City:	Irvine
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92618
Affiliation Phone:	Not reported

47
WSW
1/4-1/2
0.352 mi.
1860 ft.

ELEMENTARY SCHOOL NO. 29 **ENVIROSTOR** **S105954558**
1550-1600, 1612, 1636 WEST MERRILL AVENUE **SCH** **N/A**
RIALTO, CA 92376

Relative:
Lower

Actual:
1221 ft.

ENVIROSTOR:

Name:	ELEMENTARY SCHOOL NO. 29
Address:	1550-1600, 1612, 1636 WEST MERRILL AVENUE
City,State,Zip:	RIALTO, CA 92376
Facility ID:	36010043
Status:	Inactive - Withdrawn
Status Date:	05/13/2003
Site Code:	404449
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	12
NPL:	NO

ELEMENTARY SCHOOL NO. 29 (Continued) **S105954558**

Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Not reported
Supervisor: * Rafat Abbasi
Division Branch: Southern California Schools & Brownfields Outreach
Assembly: 47
Senate: 20
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: School District
Latitude: 34.09223
Longitude: -117.402
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - ROW CROPS
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: ELEMENTARY SCHOOL NO. 29
Alias Type: Alternate Name
Alias Name: FONTANA UNIFIED SCHOOL DISTRICT
Alias Type: Alternate Name
Alias Name: FONTANA USD-PROPOSED ES NO. 29
Alias Type: Alternate Name
Alias Name: 404449
Alias Type: Project Code (Site Code)
Alias Name: 36010043
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Workplan
Completed Date: 07/14/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 06/04/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 11/02/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 05/13/2003
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported

ELEMENTARY SCHOOL NO. 29 (Continued) **S105954558**

Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: ELEMENTARY SCHOOL NO. 29
Address: 1550-1600, 1612, 1636 WEST MERRILL AVENUE
City,State,Zip: RIALTO, CA 92376
Facility ID: 36010043
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 12
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Not reported
Supervisor: * Rafat Abbasi
Division Branch: Southern California Schools & Brownfields Outreach
Site Code: 404449
Assembly: 47
Senate: 20
Special Program Status: Not reported
Status: Inactive - Withdrawn
Status Date: 05/13/2003
Restricted Use: NO
Funding: School District
Latitude: 34.09223
Longitude: -117.402
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - ROW CROPS
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: ELEMENTARY SCHOOL NO. 29
Alias Type: Alternate Name
Alias Name: FONTANA UNIFIED SCHOOL DISTRICT
Alias Type: Alternate Name
Alias Name: FONTANA USD-PROPOSED ES NO. 29
Alias Type: Alternate Name
Alias Name: 404449
Alias Type: Project Code (Site Code)
Alias Name: 36010043
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Workplan
Completed Date: 07/14/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE

ELEMENTARY SCHOOL NO. 29 (Continued) **S105954558**

Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 06/04/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 11/02/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 05/13/2003
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

48
WNW
1/2-1
0.884 mi.
4669 ft.

ELEMENTARY SCHOOL NO. 27
8330 LOCUST AVENUE
FONTANA, CA 92335

ENVIROSTOR SCH **S107736283 N/A**

Relative: Higher

Actual: 1286 ft.

ENVIROSTOR:
Name: ELEMENTARY SCHOOL NO. 27
Address: 8330 LOCUST AVENUE
City,State,Zip: FONTANA, CA 92335-3712
Facility ID: 36010014
Status: No Further Action
Status Date: 01/03/2002
Site Code: 404209
Site Type: School Investigation
Site Type Detailed: School
Acres: 10
NPL: NO
Regulatory Agencies: DTSC
Lead Agency: DTSC
Program Manager: Not reported
Supervisor: Javier Hinojosa
Division Branch: Southern California Schools & Brownfields Outreach
Assembly: 47
Senate: 20
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: School District
Latitude: 34.10256
Longitude: -117.4096

ELEMENTARY SCHOOL NO. 27 (Continued) **S107736283**

APN: NONE SPECIFIED
Past Use: AGRICULTURAL - ROW CROPS
Potential COC: DDT Barium and compounds Molybdenum
Confirmed COC: NONE SPECIFIED
Potential Description: SOIL, SV
Alias Name: ELEMENTARY SCHOOL NO. 27 (PROPOSED)
Alias Type: Alternate Name
Alias Name: FONTANA UNIFIED SCHOOL DISTRICT
Alias Type: Alternate Name
Alias Name: FONTANA USD-ELEMENTARY SCHOOL # 27
Alias Type: Alternate Name
Alias Name: 404209
Alias Type: Project Code (Site Code)
Alias Name: 36010014
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 01/03/2002
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Workplan
Completed Date: 05/29/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 11/13/2001
Comments: Mitigated Negative Declaration & Initial Study

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 01/25/2002
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 03/16/2001
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

ELEMENTARY SCHOOL NO. 27 (Continued) **S107736283**

SCH:

Name:	ELEMENTARY SCHOOL NO. 27
Address:	8330 LOCUST AVENUE
City,State,Zip:	FONTANA, CA 92335-3712
Facility ID:	36010014
Site Type:	School Investigation
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	10
National Priorities List:	NO
Cleanup Oversight Agencies:	DTSC
Lead Agency:	DTSC
Lead Agency Description:	* DTSC
Project Manager:	Not reported
Supervisor:	Javier Hinojosa
Division Branch:	Southern California Schools & Brownfields Outreach
Site Code:	404209
Assembly:	47
Senate:	20
Special Program Status:	Not reported
Status:	No Further Action
Status Date:	01/03/2002
Restricted Use:	NO
Funding:	School District
Latitude:	34.10256
Longitude:	-117.4096
APN:	NONE SPECIFIED
Past Use:	AGRICULTURAL - ROW CROPS
Potential COC:	DDT, DDT, Barium and compounds, Molybdenum
Confirmed COC:	NONE SPECIFIED
Potential Description:	SOIL, SV
Alias Name:	ELEMENTARY SCHOOL NO. 27 (PROPOSED)
Alias Type:	Alternate Name
Alias Name:	FONTANA UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	FONTANA USD-ELEMENTARY SCHOOL # 27
Alias Type:	Alternate Name
Alias Name:	404209
Alias Type:	Project Code (Site Code)
Alias Name:	36010014
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	01/03/2002
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	* Workplan
Completed Date:	05/29/2001
Comments:	Not reported
Completed Area Name:	PROJECT WIDE

ELEMENTARY SCHOOL NO. 27 (Continued) **S107736283**

Completed Sub Area Name:	Not reported
Completed Document Type:	Other Report
Completed Date:	11/13/2001
Comments:	Mitigated Negative Declaration & Initial Study
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	01/25/2002
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Environmental Oversight Agreement
Completed Date:	03/16/2001
Comments:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

49
NW
1/2-1
0.894 mi.
4719 ft.

ELEMENTARY SCHOOL NO. 32
FOOTHILL BOULEVARD/MAPLE AVENUE
FONTANA, CA 92335

ENVIROSTOR SCH **S106568124 N/A**

Relative: Higher

Actual: 1305 ft.

ENVIROSTOR:

Name:	ELEMENTARY SCHOOL NO. 32
Address:	FOOTHILL BOULEVARD/MAPLE AVENUE
City,State,Zip:	FONTANA, CA 92335
Facility ID:	36010061
Status:	No Further Action
Status Date:	04/25/2005
Site Code:	404537
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	8.5
NPL:	NO
Regulatory Agencies:	DTSC
Lead Agency:	DTSC
Program Manager:	Not reported
Supervisor:	Shahir Haddad
Division Branch:	Southern California Schools & Brownfields Outreach
Assembly:	47
Senate:	20
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	34.06029
Longitude:	-117.4512

ELEMENTARY SCHOOL NO. 32 (Continued) **S106568124**

APN: NONE SPECIFIED
Past Use: AGRICULTURAL - ROW CROPS
Potential COC: Arsenic Chlordane DDD DDE DDT
Confirmed COC: 30001-NO 30004-NO 30006-NO 30007-NO 30008-NO
Potential Description: SOIL
Alias Name: ELEMENTARY SCHOOL NO. 32
Alias Type: Alternate Name
Alias Name: FONTANA USD-PROPOSED ELEMENTARY SCL # 32
Alias Type: Alternate Name
Alias Name: FONTANTA UNIFIED SCHOOL DISTRICT
Alias Type: Alternate Name
Alias Name: 404537
Alias Type: Project Code (Site Code)
Alias Name: 36010061
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 04/24/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 10/06/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 08/18/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 05/04/2004
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: ELEMENTARY SCHOOL NO. 32
Address: FOOTHILL BOULEVARD/MAPLE AVENUE
City,State,Zip: FONTANA, CA 92335
Facility ID: 36010061

ELEMENTARY SCHOOL NO. 32 (Continued) **S106568124**

Site Type:	School Investigation
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	8.5
National Priorities List:	NO
Cleanup Oversight Agencies:	DTSC
Lead Agency:	DTSC
Lead Agency Description:	* DTSC
Project Manager:	Not reported
Supervisor:	Shahir Haddad
Division Branch:	Southern California Schools & Brownfields Outreach
Site Code:	404537
Assembly:	47
Senate:	20
Special Program Status:	Not reported
Status:	No Further Action
Status Date:	04/25/2005
Restricted Use:	NO
Funding:	School District
Latitude:	34.06029
Longitude:	-117.4512
APN:	NONE SPECIFIED
Past Use:	AGRICULTURAL - ROW CROPS
Potential COC:	Arsenic, Chlordane, DDD, DDE, DDT
Confirmed COC:	30001-NO, 30004-NO, 30006-NO, 30007-NO, 30008-NO
Potential Description:	SOIL
Alias Name:	ELEMENTARY SCHOOL NO. 32
Alias Type:	Alternate Name
Alias Name:	FONTANA USD-PROPOSED ELEMENTARY SCL # 32
Alias Type:	Alternate Name
Alias Name:	FONTANTA UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	404537
Alias Type:	Project Code (Site Code)
Alias Name:	36010061
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	04/24/2005
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Technical Report
Completed Date:	10/06/2004
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	08/18/2005
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported

ELEMENTARY SCHOOL NO. 32 (Continued) **S106568124**

Completed Document Type:	Environmental Oversight Agreement
Completed Date:	05/04/2004
Comments:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

K50 **D & M DRUM CO** **RESPONSE** **S105838318**
ENE **137 LILAC AVENUE** **ENVIROSTOR** **N/A**
1/2-1 **RIALTO, CA 92376** **HIST Cal-Sites**
0.906 mi. **DEED**
4784 ft. **Site 1 of 2 in cluster K** **CERS**

Relative: RESPONSE:
Lower

Actual:
1224 ft.

Name:	D & M DRUM CO
Address:	137 LILAC AVENUE
City,State,Zip:	RIALTO, CA 92376
Facility ID:	36500010
Site Type:	State Response
Site Type Detail:	State Response or NPL
Acres:	0.73
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Joseph Cully
Supervisor:	Patrick Hsieh
Division Branch:	Cleanup Cypress
Site Code:	401795
Site Mgmt. Req.:	NONE SPECIFIED
Assembly:	47
Senate:	20
Special Program Status:	Not reported
Status:	Certified O&M - Land Use Restrictions Only
Status Date:	01/12/2015
Restricted Use:	YES
Funding:	Responsible Party
Latitude:	34.09866
Longitude:	-117.3787
APN:	NONE SPECIFIED
Past Use:	EQUIPMENT/INSTRUMENT REPAIR, MACHINE SHOP, METAL FINISHING, METAL PLATING - OTHER, PAINT/DEPAINT FACILITY, PESTICIDE/INSECTIDE/RODENTICIDE STORAGE, RECYCLING - OTHER, RECYCLING - SCRAP METAL, RECYCLING - USED OIL , SAND BLASTING, BATTERY MANUFACTURING, BATTERY STORAGE, FUEL - VEHICLE STORAGE/ REFUELING, MACHINE SHOP, METAL FINISHING, METAL PLATING - CHROME, METAL PLATING - OTHER, PAINT/DEPAINT FACILITY, VEHICLE MAINTENANCE
Potential COC :	* HALOGENATED ORGANIC COMPOUNDS * HYDROCARBON SOLVENTS * OXYGENATED SOLVENTS * WASTE OIL & MIXED OIL * OTHER PESTICIDE CONTAINERS, 30 GALLONS OR MORE * POLYMERIC RESIN WASTE Cyanide (free Tetrachloroethylene (PCE Antimony and compounds Chloroform Ethylbenzene Xylenes

D & M DRUM CO (Continued) **S105838318**

Confirmed COC: Tetrachloroethylene (PCE Antimony and compounds Chloroform Ethylbenzene Xylenes
Potential Description: SOIL, SV, IA
Alias Name: CAT080010432
Alias Type: EPA Identification Number
Alias Name: 110002945118
Alias Type: EPA (FRS #)
Alias Name: 110033616610
Alias Type: EPA (FRS #)
Alias Name: 401078
Alias Type: Project Code (Site Code)
Alias Name: 401703
Alias Type: Project Code (Site Code)
Alias Name: 401795
Alias Type: Project Code (Site Code)
Alias Name: 36500010
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 11/25/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/29/2010
Comments: Letter sent on 10/29/2010.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Report
Completed Date: 06/30/2005
Comments: A Site Characterization was completed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 04/25/1995
Comments: PRELIM ASSESS CONE. EPA RECOMMENDATION: SSI (MED) PENDING RESULTS OF CHP INVESTIGATION. STATE RECOMMENDATION: SI (MED) BASED. NFA FOR DTSC. Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 06/30/1988
Comments: ENFORCEMENT(OTHER) ENFORCEMENT ONGOING. D&M CURRENTLY UNDER INVESTIGATION BY CHP AND CO HEALTH FOR ILLEGAL TRANSPORTATION, TREATMENT, STROAGE AND DISPOSAL. PRELIM ASSESS DONE EPA RECOMMENDATION: SSI (MED) PENDING RESULTS OF CHP INVESTIGATION. STATE RECOMMENDATION: SI (MED) BASED ON EVIDENCE OF POTENTIAL RELEASES OF HAZARDOUS WASTES AND GROUND WATER CONTAMINATION.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

D & M DRUM CO (Continued) **S105838318**

Completed Document Type: Site Screening
Completed Date: 03/10/1987
Comments: SITE SCREENING DONE FURTHER RECORD SEARCH NEEDED.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Workplan
Completed Date: 10/02/2007
Comments: DTSC issued an approval letter for the work plan.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 07/23/2007
Comments: Contract to conduct a supplemental site investigation.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 03/01/2007
Comments: Work plan for supplemental site investigation.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 08/06/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 04/16/2008
Comments: DTSC sent letter on April 16, 2008, stating that the SSI report had been approved as revised.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 02/08/2008
Comments: The new property owner sent a copy of a check for $50,000 that she had paid to DTSC as partial payment for what the Site owes DTSC.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Risk Assessment Workplan
Completed Date: 07/23/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Risk Assessment Report
Completed Date: 02/09/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report

D & M DRUM CO (Continued) **S105838318**

Completed Date:	03/07/2016
Comments:	DTSC accepted this report without comment.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Final Determination of Non-Compliance
Completed Date:	04/25/2011
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Unilateral Order (I/SE, RAO, CAO, EPA AO)
Completed Date:	04/11/2003
Comments:	DTSC issued an order to Mr. and Mrs. James and Frieda Collins (Property Owners) and to Mr. and Mrs. David and Marie Davis (Operators). Order was to investigate the contamination at site and conduct remedial action.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	* Discovery
Completed Date:	04/15/1983
Comments:	FACILITY IDENTIFIED ID VIA DMI LIST
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Land Use Restriction
Completed Date:	08/06/2014
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	02/21/2008
Comments:	A Stop Work Order letter was issued to the contractor, Geomatrix, ordering the contractor to stop work on Tasks 7 and 9 on the Work Order for this site. Contractor will continue to complete the Supplemental Site Investigation until the Report is approved.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Lien
Completed Date:	03/06/2008
Comments:	Lien was issued on March 6, 2008.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Proposed Determination of non-compliance
Completed Date:	02/23/2011
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	11/01/2011
Comments:	Not reported

D & M DRUM CO (Continued) **S105838318**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 11/29/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Consent Settlement - Administrative
Completed Date: 09/12/2014
Comments: Received check of $300,000 on September 12, 2014 as payment from property owner.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 12/02/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 01/12/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Final Determination of Non-Compliance
Completed Date: 08/26/2003
Comments: The Notice of Final Determination of Non-Compliance with a previously issued Imminent and Substantial Endangerment Determination and Remedial Action Order was issued on August 26, 2003.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Consent Order
Completed Date: 09/02/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 11/21/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 01/08/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Lien Satisfaction
Completed Date: 10/23/2014
Comments: Not reported

D & M DRUM CO (Continued) **S105838318**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 01/16/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/29/2015
Comments: Letter sent out on this date.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 01/09/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/21/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 01/09/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 11/28/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 02/13/2020
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 12/19/2019
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

D & M DRUM CO (Continued) **S105838318**

ENVIROSTOR:

Name:	D & M DRUM CO
Address:	137 LILAC AVENUE
City,State,Zip:	RIALTO, CA 92376
Facility ID:	36500010
Status:	Certified O&M - Land Use Restrictions Only
Status Date:	01/12/2015
Site Code:	401795
Site Type:	State Response
Site Type Detailed:	State Response or NPL
Acres:	0.73
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Joseph Cully
Supervisor:	Patrick Hsieh
Division Branch:	Cleanup Cypress
Assembly:	47
Senate:	20
Special Program:	Not reported
Restricted Use:	YES
Site Mgmt Req:	NONE SPECIFIED
Funding:	Responsible Party
Latitude:	34.09866
Longitude:	-117.3787
APN:	NONE SPECIFIED
Past Use:	EQUIPMENT/INSTRUMENT REPAIR, MACHINE SHOP, METAL FINISHING, METAL PLATING - OTHER, PAINT/DEPAINT FACILITY, PESTICIDE/INSECTIDE/RODENTICIDE STORAGE, RECYCLING - OTHER, RECYCLING - SCRAP METAL, RECYCLING - USED OIL , SAND BLASTING, BATTERY MANUFACTURING, BATTERY STORAGE, FUEL - VEHICLE STORAGE/ REFUELING, MACHINE SHOP, METAL FINISHING, METAL PLATING - CHROME, METAL PLATING - OTHER, PAINT/DEPAINT FACILITY, VEHICLE MAINTENANCE
Potential COC:	* HALOGENATED ORGANIC COMPOUNDS * HYDROCARBON SOLVENTS * OXYGENATED SOLVENTS * WASTE OIL & MIXED OIL * OTHER PESTICIDE CONTAINERS, 30 GALLONS OR MORE * POLYMERIC RESIN WASTE Cyanide (free Tetrachloroethylene (PCE Antimony and compounds Chloroform Ethylbenzene Xylenes
Confirmed COC:	Tetrachloroethylene (PCE Antimony and compounds Chloroform Ethylbenzene Xylenes
Potential Description:	SOIL, SV, IA
Alias Name:	CAT080010432
Alias Type:	EPA Identification Number
Alias Name:	110002945118
Alias Type:	EPA (FRS #)
Alias Name:	110033616610
Alias Type:	EPA (FRS #)
Alias Name:	401078
Alias Type:	Project Code (Site Code)
Alias Name:	401703
Alias Type:	Project Code (Site Code)
Alias Name:	401795
Alias Type:	Project Code (Site Code)
Alias Name:	36500010
Alias Type:	Envirostor ID Number

Completed Info:

D & M DRUM CO (Continued) **S105838318**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 11/25/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/29/2010
Comments: Letter sent on 10/29/2010.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Report
Completed Date: 06/30/2005
Comments: A Site Characterization was completed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 04/25/1995
Comments: PRELIM ASSESS CONE. EPA RECOMMENDATION: SSI (MED) PENDING RESULTS OF CHP INVESTIGATION. STATE RECOMMENDATION: SI (MED) BASED. NFA FOR DTSC.
Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 06/30/1988
Comments: ENFORCEMENT(OTHER) ENFORCEMENT ONGOING. D&M CURRENTLY UNDER INVESTIGATION BY CHP AND CO HEALTH FOR ILLEGAL TRANSPORTATION, TREATMENT, STROAGE AND DISPOSAL. PRELIM ASSESS DONE EPA RECOMMENDATION: SSI (MED) PENDING RESULTS OF CHP INVESTIGATION. STATE RECOMMENDATION: SI (MED) BASED ON EVIDENCE OF POTENTIAL RELEASES OF HAZARDOUS WASTES AND GROUND WATER CONTAMINATION.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 03/10/1987
Comments: SITE SCREENING DONE FURTHER RECORD SEARCH NEEDED.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Workplan
Completed Date: 10/02/2007
Comments: DTSC issued an approval letter for the work plan.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 07/23/2007
Comments: Contract to conduct a supplemental site investigation.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

D & M DRUM CO (Continued) **S105838318**

Completed Document Type: Technical Workplan
Completed Date: 03/01/2007
Comments: Work plan for supplemental site investigation.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 08/06/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 04/16/2008
Comments: DTSC sent letter on April 16, 2008, stating that the SSI report had been approved as revised.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 02/08/2008
Comments: The new property owner sent a copy of a check for $50,000 that she had paid to DTSC as partial payment for what the Site owes DTSC.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Risk Assessment Workplan
Completed Date: 07/23/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Risk Assessment Report
Completed Date: 02/09/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report
Completed Date: 03/07/2016
Comments: DTSC accepted this report without comment.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Final Determination of Non-Compliance
Completed Date: 04/25/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Unilateral Order (I/SE, RAO, CAO, EPA AO)
Completed Date: 04/11/2003
Comments: DTSC issued an order to Mr. and Mrs. James and Frieda Collins (Property Owners) and to Mr. and Mrs. David and Marie Davis (Operators). Order was to investigate the contamination at site and conduct remedial action.

D & M DRUM CO (Continued) **S105838318**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 04/15/1983
Comments: FACILITY IDENTIFIED ID VIA DMI LIST

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction
Completed Date: 08/06/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 02/21/2008
Comments: A Stop Work Order letter was issued to the contractor, Geomatrix, ordering the contractor to stop work on Tasks 7 and 9 on the Work Order for this site. Contractor will continue to complete the Supplemental Site Investigation until the Report is approved.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Lien
Completed Date: 03/06/2008
Comments: Lien was issued on March 6, 2008.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Proposed Determination of non-compliance
Completed Date: 02/23/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 11/01/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 11/29/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Consent Settlement - Administrative
Completed Date: 09/12/2014
Comments: Received check of $300,000 on September 12, 2014 as payment from property owner.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 12/02/2013
Comments: Not reported

D & M DRUM CO (Continued) **S105838318**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 01/12/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Final Determination of Non-Compliance
Completed Date: 08/26/2003
Comments: The Notice of Final Determination of Non-Compliance with a previously issued Imminent and Substantial Endangerment Determination and Remedial Action Order was issued on August 26, 2003.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Consent Order
Completed Date: 09/02/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 11/21/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 01/08/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Lien Satisfaction
Completed Date: 10/23/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 01/16/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/29/2015
Comments: Letter sent out on this date.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 01/09/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE

D & M DRUM CO (Continued) **S105838318**

Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/21/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 01/09/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 11/28/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 02/13/2020
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 12/19/2019
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

Calsite:
Name: D & M DRUM CO
Address: 137 LILAC AVENUE
City: RIALTO
Region: CYPRESS
Facility ID: 36500010
Facility Type: RP
Type: RESPONSIBLE PARTY
Branch: SB
Branch Name: SO CAL - CYPRESS
File Name: Not reported
State Senate District: 04112003
Status: ANNUAL WORKPLAN (AWP) - ACTIVE SITE
Status Name: ANNUAL WORKPLAN - ACTIVE SITE
Lead Agency: DEPT OF TOXIC SUBSTANCES CONTROL
NPL: Not Listed
SIC Code: 50
SIC Name: WHOLESALE TRADE - DURABLE GOODS

D & M DRUM CO (Continued) **S105838318**

Access:	Uncontrolled
Cortese:	Not reported
Hazardous Ranking Score:	Not reported
Date Site Hazard Ranked:	Not reported
Groundwater Contamination:	Not reported
Staff Member Responsible for Site:	JCULLY
Supervisor Responsible for Site:	Not reported
Region Water Control Board:	SA
Region Water Control Board Name:	SANTA ANA
Lat/Long Direction:	Not reported
Lat/Long (dms):	0 0 0 / 0 0 0
Lat/long Method:	Not reported
Lat/Long Description:	Not reported
State Assembly District Code:	62
State Senate District Code:	32
Facility ID:	36500010
Activity:	DISC
Activity Name:	DISCOVERY
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	04151983
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36500010
Activity:	SS
Activity Name:	SITE SCREENING
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	03101987
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported

D & M DRUM CO (Continued) **S105838318**

Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36500010
Activity:	SS
Activity Name:	SITE SCREENING
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	04251995
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36500010
Activity:	ORDER
Activity Name:	I/SE, IORSE, FFA, FFSRA, VCA, EA
AWP Code:	IS&E
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	04112003
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36500010
Activity:	PEA
Activity Name:	PRELIMINARY ENDANGERMENT ASSESSMENT

D & M DRUM CO (Continued) **S105838318**

AWP Code:	PEAE
Proposed Budget:	0
AWP Completion Date:	12312004
Revised Due Date:	06302005
Comments Date:	06302005
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Alternate Address:	137 LILAC AVENUE
Alternate City,St,Zip:	RIALTO, CA 92376
Background Info:	D & M Drum Company operated a drum recycling business from 1980 to 1989. The San Bernardino County Department of Environmental Health (SBCDEH) conducted annual facility inspections during this period. In 1991 SBCDEH issued an order to the owner for corrective action. The site was referred to DTSC in 1995 by SBCDEH for further action. It is in the process of developing an RI for soil sampling. Not reported
Comments Date:	03101987
Comments:	SITE SCREENING DONE FURTHER RECORD SEARCH NEEDED.
Comments Date:	04112003
Comments:	DTSC issued an order to Mr. and Mrs. James and Frieda Collins
Comments Date:	04112003
Comments:	(Property Owners) and to Mr. and Mrs. David and Marie Davis
Comments Date:	04112003
Comments:	(Operators). Order was to investigate the contamination at
Comments Date:	04112003
Comments:	site and conduct remedial action.
Comments Date:	04151983
Comments:	FACILITY IDENTIFIED ID VIA DMI LIST
Comments Date:	04251995
Comments:	PRELIM ASSESS CONE. EPA RECOMMENDATION: SSI (MED)
Comments Date:	04251995
Comments:	PENDING RESULTS OF CHP INVESTIGATION. STATE
Comments Date:	04251995
Comments:	RECOMMENDATION: SI (MED) BASED. NFA FOR DTSC.
Comments Date:	04251995
Comments:	Not reported
Comments Date:	05112004
Comments:	Site visit to identify areas of concern and areas that need to
Comments Date:	05112004
Comments:	be sampled.
Comments Date:	06141988
Comments:	FACILITY DRIVE-BY DRIVE BY: HUNDREDS OF DRUMS (55, 30, AND

D & M DRUM CO (Continued) **S105838318**

Comments Date:	06141988
Comments:	5 GAL). STAINING AND POOLING SEEN ON
Comments Date:	06141988
Comments:	GROUND, DRUM OUTSIDE FENCE, FENCE PROPED
Comments Date:	06141988
Comments:	UP BY 2X4S, OILY/DARK STAINS/POOLS OUT-
Comments Date:	06141988
Comments:	SIDE GATE DRAINING TO GUTTER.
Comments Date:	06151988
Comments:	RECORDS SEARCH: SB CO. ASSESSOR'S OFFICE
Comments Date:	06151988
Comments:	RIALTO FIRE DEPT.
Comments Date:	06151988
Comments:	SB CO. DEPT. OF ENVIR. HEALTH SERVICES
Comments Date:	06151988
Comments:	CALIFORNIA HIGHWAY PATROL
Comments Date:	06151988
Comments:	RIALTO WATER DEPT.
Comments Date:	06151988
Comments:	WEST S.B. COUNTY WATER DISTRICT
Comments Date:	06151988
Comments:	SANTA ANA REGION RWQCB
Comments Date:	06231983
Comments:	FACILITY DRIVE-BY 100'S OF 55 GALLON DRUMS ON SITE
Comments Date:	06241983
Comments:	DRUM RECYCLER
Comments Date:	06241983
Comments:	FINAL STRATEGY SITE REFERRED: TO HWMB/ENF
Comments Date:	06301988
Comments:	ENFORCEMENT(OTHER) ENFORCEMENT ONGOING. D&M CURRENTLY
Comments Date:	06301988
Comments:	UNDER INVESTIGATION BY CHP AND CO HEALTH
Comments Date:	06301988
Comments:	FOR ILLEGAL TRANSPORTATION, TREATMENT,
Comments Date:	06301988
Comments:	STROAGE AND DISPOSAL.
Comments Date:	06301988
Comments:	PRELIM ASSESS DONE EPA RECOMMENDATION: SSI (MED) PENDING
Comments Date:	06301988
Comments:	RESULTS OF CHP INVESTIGATION.
Comments Date:	06301988
Comments:	STATE RECOMMENDATION: SI (MED) BASED
Comments Date:	06301988
Comments:	ON EVIDENCE OF POTENTIAL RELEASES OF
Comments Date:	06301988
Comments:	HAZARDOUS WASTES AND GROUND WATER
Comments Date:	06301988
Comments:	CONTAMINATION.
Comments Date:	06302005
Comments:	A Site Characterization was completed.
Comments Date:	08221995
Comments:	EPA lead, NFA under CERCLA.
Comments Date:	11062001
Comments:	DTSC still has concerns about potential contamination. Letter
Comments Date:	11062001
Comments:	sent to RP requiring a PEA.
Comments Date:	12142001

D & M DRUM CO (Continued) **S105838318**

Comments: Second letter sent to RP requiring a PEA.
ID Name: EPA IDENTIFICATION NUMBER
ID Value: CAT080010432
ID Name: CALSTARS CODE
ID Value: 401078
Alternate Name: D & M DRUM CO
Alternate Name: Not reported
Special Programs Code: CERC2
Special Programs Name: CERCLA II

DEED:
Name: D & M DRUM CO
Address: 137 LILAC AVENUE
City,State,Zip: RIALTO, CA 92376
Envirostor ID: 36500010
Area: PROJECT WIDE
Sub Area: Not reported
Site Type: STATE RESPONSE
Status: CERTIFIED O&M - LAND USE RESTRICTIONS ONLY
Agency: Not reported
Covenant Uploaded: Not reported
Deed Date(s): Not reported
File Name: Envirostor Land Use Restrictions

CERS:
Name: D & M DRUM CO
Address: 137 LILAC AVENUE
City,State,Zip: RIALTO, CA 92376
Site ID: 336567
CERS ID: 36500010
CERS Description: State Response

Affiliation:
Affiliation Type Desc: Lead Project Manager
Entity Name: JOSEPH CULLY
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: CYPRESS
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Supervisor
Entity Name: PATRICK HSIEH
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

K51 **SALES UNLIMITED INC.** **ENVIROSTOR** **S101591576**
ENE **491 W RIALTO AVE** **SWEEPS UST** **N/A**
1/2-1 **RIALTO, CA 92376** **CA FID UST**
0.916 mi. **HAZNET**
4837 ft. **Site 2 of 2 in cluster K** **San Bern. Co. Permit**
HWTS

Relative:
Lower

Actual:
1227 ft.

ENVIROSTOR:

Name:	SALES UNLIMITED
Address:	491 RIALTO AVENUE
City,State,Zip:	RIALTO, CA 92376
Facility ID:	60000814
Status:	No Action Required
Status Date:	08/28/2006
Site Code:	Not reported
Site Type:	Evaluation
Site Type Detailed:	Evaluation
Acres:	0.55
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Joseph Cully
Supervisor:	Douglas Bautista
Division Branch:	Cleanup Cypress
Assembly:	47
Senate:	20
Special Program:	EPA - PASI
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	EPA Grant
Latitude:	34.09916
Longitude:	-117.3787
APN:	NONE SPECIFIED
Past Use:	MAINTENANCE / CLEANING, OIL/WATER SEPARATORS, UNKNOWN, VEHICLE MAINTENANCE
Potential COC:	Tetrachloroethylene (PCE
Confirmed COC:	Tetrachloroethylene (PCE
Potential Description:	SV
Alias Name:	60000814
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Screening
Completed Date:	02/19/2008
Comments:	Site Screening Assessment Report approved by EPA.
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

SWEEPS UST:

SALES UNLIMITED INC. (Continued) **S101591576**

Name: SALES UNLIMITED INC
Address: 491 W RIALTO AVE
City: RIALTO
Status: Active
Comp Number: 8417
Number: 1
Board Of Equalization: 44-020059
Referral Date: 03-24-92
Action Date: 03-24-92
Created Date: 09-16-88
Owner Tank Id: Not reported
SWRCB Tank Id: Not reported
Tank Status: Not reported
Capacity: Not reported
Active Date: Not reported
Tank Use: Not reported
STG: Not reported
Content: Not reported
Number Of Tanks: Not reported

Name: SALES UNLIMITED INC
Address: 491 W RIALTO AVE
City: RIALTO
Status: Not reported
Comp Number: 8417
Number: Not reported
Board Of Equalization: 44-020059
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-008417-000001
Tank Status: Not reported
Capacity: 1000
Active Date: Not reported
Tank Use: EMPTY
STG: PRODUCT
Content: UNKNOWN
Number Of Tanks: 1

CA FID UST:
Facility ID: 36008438
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: Not reported
Mail To: Not reported
Mailing Address: P O BOX
Mailing Address 2: Not reported
Mailing City,St,Zip: RIALTO 92376
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported

SALES UNLIMITED INC. (Continued) **S101591576**

Status: Active

HAZNET:

Name:	SALES UNLIMITED INC.
Address:	491 W RIALTO AVE
Address 2:	Not reported
City,State,Zip:	RIALTO, CA 923765844
Contact:	TIM GRIMM
Telephone:	9098946566
Mailing Name:	Not reported
Mailing Address:	491 W RIALTO AVE
Year:	2016
Gepaid:	CAC002849977
TSD EPA ID:	CAD028409019
CA Waste Code:	141 - Off-specification, aged or surplus inorganics
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.27105
Year:	2016
Gepaid:	CAC002849977
TSD EPA ID:	CAD028409019
CA Waste Code:	122 - Alkaline solution without metals pH >= 12.5
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.4587
Year:	2016
Gepaid:	CAC002849977
TSD EPA ID:	CAD028409019
CA Waste Code:	331 - Off-specification, aged or surplus organics
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.165

San Bern. Co. Permit:

Name:	SALES UNLIMITED INC
Address:	491 W RIALTO AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0005873
Owner:	SALES UNLIMITED INC
Permit Number:	PT0023166
Permit Category:	SMALL QUANTITY GENERATOR
Facility Status:	INACTIVE
Expiration Date:	05/31/2016
Name:	SALES UNLIMITED INC
Address:	491 W RIALTO AVE
City,State,Zip:	RIALTO, CA 92376
Region:	SAN BERNARDINO
Facility ID:	FA0005873
Owner:	SALES UNLIMITED INC
Permit Number:	PT0001986

SALES UNLIMITED INC. (Continued) **S101591576**

Permit Category: HAZARDOUS MATERIALS 4-10 CHEMICALS
Facility Status: INACTIVE
Expiration Date: 05/31/2016

HWTS:

Name:	SALES UNLIMITED INC.
Address:	491 W RIALTO AVE
Address 2:	Not reported
City,State,Zip:	RIALTO, CA 923765844
EPA ID:	CAC002849977
Inactive Date:	05/24/2016
Create Date:	02/22/2016
Last Act Date:	05/24/2016
Mailing Name:	Not reported
Mailing Address:	491 W RIALTO AVE
Mailing Address 2:	Not reported
Mailing City,State,Zip:	RIALTO, CA 923765844
Owner Name:	TIM GRIMM
Owner Address:	491 W RIALTO AVE
Owner Address 2:	Not reported
Owner City,State,Zip:	RIALTO, CA 923765844
Contact Name:	TIM GRIMM
Contact Address:	491 W RIALTO AVE
Contact Address 2:	Not reported
City,State,Zip:	RIALTO, CA 923765844

NAICS:

EPA ID:	CAC002849977
Create Date:	2016-02-22 13:11:44.960
NAICS Code:	42185
NAICS Description:	Service Establishment Equipment and Supplies Wholesalers
Issued EPA ID Date:	2016-02-22 13:11:44.96300
Inactive Date:	2016-05-24 03:00:21.03700
Facility Name:	SALES UNLIMITED INC.
Facility Address:	491 W RIALTO AVE
Facility Address 2:	Not reported
Facility City:	RIALTO
Facility County:	Not reported
Facility State:	CA
Facility Zip:	923765844

Name:	SALES UNLIMITED INC
Address:	491 W RIALTO AVE
Address 2:	Not reported
City,State,Zip:	RIALTO, CA 923765844
EPA ID:	CAL000352150
Inactive Date:	06/30/2015
Create Date:	04/30/2010
Last Act Date:	01/27/2016
Mailing Name:	Not reported
Mailing Address:	PO BOX 308
Mailing Address 2:	Not reported
Mailing City,State,Zip:	RIALTO, CA 923770308
Owner Name:	SALES UNLIMITED INC
Owner Address:	491 W RIALTO AVENUE
Owner Address 2:	Not reported

SALES UNLIMITED INC. (Continued) **S101591576**

Owner City,State,Zip:	RIALTO, CA 923760000
Contact Name:	TIM GRIMM
Contact Address:	491 W RIALTO AVE
Contact Address 2:	Not reported
City,State,Zip:	RIALTO, CA 923765844

NAICS:

EPA ID:	CAL000352150
Create Date:	2010-04-30 15:19:17.310
NAICS Code:	99999
NAICS Description:	Not Otherwise Specified
Issued EPA ID Date:	2010-04-30 15:19:17.28000
Inactive Date:	2015-06-30 00:00:00
Facility Name:	SALES UNLIMITED INC
Facility Address:	491 W RIALTO AVE
Facility Address 2:	Not reported
Facility City:	RIALTO
Facility County:	Not reported
Facility State:	CA
Facility Zip:	923765844

Count: 6 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
FONTANA	S125431916	SCE - FLANCO	SOUTHWESTERN CORNER OF ORANGE	92335	ENVIROSTOR, VCP
RIALTO	S121668073	RIALTO PHASE IB	NW CORNER CEDAR MERRILL AVES	92376	CIWQS
RIALTO	S121668056	RIALTO 3	NWC OF RIALTO AVENUE TO CEDAR	92376	CIWQS
RIALTO	S121668057	RIALTO 9TH GRADE CAMPUS	1262 W RIALTO AVE NEC OF CEDAR	92376	CIWQS
RIALTO	S106387331	RIALTO UNIFIED SCHOOL DISTRICT	625 RIALTO AVE	92376	LUST
RIALTO	S121668071	RIALTO I	SWC CEDAR MERRILL AVES	92376	CIWQS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 03/04/2021
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 03/04/2021
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 03/04/2021
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 12/23/2020
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 35

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/04/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 35

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/04/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 11/11/2020
Date Data Arrived at EDR: 11/17/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 84

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/08/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 10/28/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 11/18/2020
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/23/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 10/28/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 11/18/2020
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/23/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/15/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 7

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 12/15/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 10/26/2020
Date Data Arrived at EDR: 10/26/2020
Date Made Active in Reports: 01/13/2021
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/26/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 10/26/2020
Date Data Arrived at EDR: 10/26/2020
Date Made Active in Reports: 01/13/2021
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/26/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/09/2020
Date Data Arrived at EDR: 11/10/2020
Date Made Active in Reports: 01/14/2021
Number of Days to Update: 65

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/09/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 78
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/15/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 07/21/2020
Date Data Arrived at EDR: 09/03/2020
Date Made Active in Reports: 11/25/2020
Number of Days to Update: 83

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 01/04/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases
UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 12/02/2020
Date Data Arrived at EDR: 12/08/2020
Date Made Active in Reports: 02/23/2021
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 12/08/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 12/09/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 12/15/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 85

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 78

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 12/15/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 10/26/2020
Date Data Arrived at EDR: 10/26/2020
Date Made Active in Reports: 01/13/2021
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/26/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Quarterly

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 09/21/2020
Date Data Arrived at EDR: 09/22/2020
Date Made Active in Reports: 12/11/2020
Number of Days to Update: 80

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/11/2020
Date Data Arrived at EDR: 12/11/2020
Date Made Active in Reports: 03/02/2021
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/11/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 01/25/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/08/2020
Date Made Active in Reports: 02/22/2021
Number of Days to Update: 76

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/08/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 11/23/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/08/2021
Number of Days to Update: 77

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 02/08/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 01/25/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 01/29/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/09/2020
Date Made Active in Reports: 03/02/2021
Number of Days to Update: 83

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 10/26/2020
Date Data Arrived at EDR: 10/26/2020
Date Made Active in Reports: 01/13/2021
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/26/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2019
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 10/19/2020
Date Data Arrived at EDR: 10/19/2020
Date Made Active in Reports: 01/07/2021
Number of Days to Update: 80

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 01/20/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/09/2020
Date Made Active in Reports: 03/02/2021
Number of Days to Update: 83

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/08/2020
Date Made Active in Reports: 02/22/2021
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 02/24/2021
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 05/20/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/06/2020
Number of Days to Update: 78

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing
Aboveground storage tank sites

Date of Government Version: 11/05/2020
Date Data Arrived at EDR: 11/06/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 81

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

CERS TANKS: California Environmental Reporting System (CERS) Tanks
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 10/19/2020
Date Data Arrived at EDR: 10/19/2020
Date Made Active in Reports: 01/07/2021
Number of Days to Update: 80

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 01/20/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Quarterly

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 11/24/2020
Date Data Arrived at EDR: 11/30/2020
Date Made Active in Reports: 02/10/2021
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 03/04/2021
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 11/30/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/12/2021
Number of Days to Update: 73
Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 03/03/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/20/2020
Date Data Arrived at EDR: 09/22/2020
Date Made Active in Reports: 12/14/2020
Number of Days to Update: 83
Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 09/30/2020
Date Data Arrived at EDR: 10/19/2020
Date Made Active in Reports: 01/07/2021
Number of Days to Update: 80
Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 01/20/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76
Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 09/29/2020
Date Data Arrived at EDR: 11/17/2020
Date Made Active in Reports: 01/25/2021
Number of Days to Update: 69

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/17/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 01/15/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 01/07/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/09/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/21/2020
Date Data Arrived at EDR: 09/22/2020
Date Made Active in Reports: 12/14/2020
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 02/02/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/05/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 12/18/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/02/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 10/19/2020
Date Data Arrived at EDR: 10/19/2020
Date Made Active in Reports: 01/04/2021
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 01/21/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 35

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 03/04/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/02/2020
Date Data Arrived at EDR: 11/12/2020
Date Made Active in Reports: 01/25/2021
Number of Days to Update: 74

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 34
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 01/14/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/09/2019
Date Data Arrived at EDR: 10/11/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 70
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 01/08/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/30/2020
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/05/2020
Date Data Arrived at EDR: 08/10/2020
Date Made Active in Reports: 10/08/2020
Number of Days to Update: 59
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 70
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 12/01/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/02/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 02/05/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 01/08/2021
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 01/27/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 09/30/2020
Date Data Arrived at EDR: 10/08/2020
Date Made Active in Reports: 01/04/2021
Number of Days to Update: 88

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 01/04/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 11/20/2020
Number of Days to Update: 151

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 12/23/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 01/08/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 02/02/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/18/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 03/04/2021
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 01/25/2021
Number of Days to Update: 63

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/24/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 11/24/2020
Date Data Arrived at EDR: 11/30/2020
Date Made Active in Reports: 01/25/2021
Number of Days to Update: 56

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 03/01/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 12/11/2020
Date Data Arrived at EDR: 12/11/2020
Date Made Active in Reports: 03/02/2021
Number of Days to Update: 81

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 12/10/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/04/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 01/25/2021
Number of Days to Update: 55

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 03/03/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 10/03/2020
Date Data Arrived at EDR: 10/06/2020
Date Made Active in Reports: 01/04/2021
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 01/08/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites
A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 07/02/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 77
Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 01/15/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing
A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/17/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 11/13/2020
Date Data Arrived at EDR: 11/13/2020
Date Made Active in Reports: 01/25/2021
Number of Days to Update: 73
Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/17/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6
Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 06/22/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/04/2020
Number of Days to Update: 74
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing
list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64
Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 02/12/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 11/17/2020
Date Data Arrived at EDR: 11/18/2020
Date Made Active in Reports: 02/04/2021
Number of Days to Update: 78

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 11/23/2020
Date Data Arrived at EDR: 11/25/2020
Date Made Active in Reports: 02/10/2021
Number of Days to Update: 77

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Annually

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 11/23/2020
Date Data Arrived at EDR: 11/24/2020
Date Made Active in Reports: 02/10/2021
Number of Days to Update: 78

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Varies

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 06/16/2020
Date Made Active in Reports: 08/28/2020
Number of Days to Update: 73

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 12/18/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 10/16/2020
Date Data Arrived at EDR: 10/19/2020
Date Made Active in Reports: 01/07/2021
Number of Days to Update: 80

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 01/20/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 10/13/2020
Date Data Arrived at EDR: 10/14/2020
Date Made Active in Reports: 01/04/2021
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 01/22/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 11/12/2020
Date Data Arrived at EDR: 11/13/2020
Date Made Active in Reports: 01/29/2021
Number of Days to Update: 77

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 02/08/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 04/15/2020
Date Made Active in Reports: 07/02/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 01/05/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 11/13/2020
Date Data Arrived at EDR: 11/13/2020
Date Made Active in Reports: 02/01/2021
Number of Days to Update: 80

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 02/17/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 11/13/2020
Date Data Arrived at EDR: 11/13/2020
Date Made Active in Reports: 02/01/2021
Number of Days to Update: 80

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/17/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 10/05/2020
Date Data Arrived at EDR: 10/06/2020
Date Made Active in Reports: 12/23/2020
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 01/05/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/08/2020
Date Made Active in Reports: 02/22/2021
Number of Days to Update: 76
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 12/08/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 10/30/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/12/2021
Number of Days to Update: 73
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 03/03/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 11/09/2020
Date Data Arrived at EDR: 11/10/2020
Date Made Active in Reports: 01/27/2021
Number of Days to Update: 78
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 02/09/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 11/30/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/12/2021
Number of Days to Update: 73
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 03/03/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/08/2020
Date Made Active in Reports: 02/22/2021
Number of Days to Update: 76
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/08/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/09/2020
Date Made Active in Reports: 12/10/2020
Number of Days to Update: 1
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 12/07/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 02/01/2021
Date Data Arrived at EDR: 02/19/2021
Date Made Active in Reports: 02/22/2021
Number of Days to Update: 3
Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 02/18/2021
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76
Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 11/19/2019
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 62
Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 01/08/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9
Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13
Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 12/15/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/08/2020
Date Made Active in Reports: 02/22/2021
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 12/08/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 11/30/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/12/2021
Number of Days to Update: 73

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 03/03/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 10/19/2020
Date Data Arrived at EDR: 10/19/2020
Date Made Active in Reports: 01/07/2021
Number of Days to Update: 80

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 01/20/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System
DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 10/13/2020
Date Data Arrived at EDR: 10/14/2020
Date Made Active in Reports: 11/03/2020
Number of Days to Update: 20
Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3
Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29
Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 12/30/2020
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Varies

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 01/04/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Semi-Annually

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 01/04/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Semi-Annually

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 01/04/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 10/06/2020
Date Made Active in Reports: 12/23/2020
Number of Days to Update: 78

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 01/04/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 10/19/2020
Date Data Arrived at EDR: 10/22/2020
Date Made Active in Reports: 01/12/2021
Number of Days to Update: 82

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 12/30/2020
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 12/15/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 12/24/2020
Number of Days to Update: 8

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 12/15/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 10/19/2020
Date Data Arrived at EDR: 10/22/2020
Date Made Active in Reports: 01/13/2021
Number of Days to Update: 83

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 01/25/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 08/13/2020
Date Made Active in Reports: 10/22/2020
Number of Days to Update: 70

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 01/25/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 10/22/2020
Date Data Arrived at EDR: 11/03/2020
Date Made Active in Reports: 01/20/2021
Number of Days to Update: 78

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 02/08/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 10/02/2020
Date Data Arrived at EDR: 10/06/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 77

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 01/15/2021
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 11/18/2020
Date Data Arrived at EDR: 11/19/2020
Date Made Active in Reports: 02/04/2021
Number of Days to Update: 77

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 10/14/2020
Date Data Arrived at EDR: 10/15/2020
Date Made Active in Reports: 01/05/2021
Number of Days to Update: 82

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List
A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 10/29/2020
Date Data Arrived at EDR: 10/30/2020
Date Made Active in Reports: 01/15/2021
Number of Days to Update: 77

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 01/19/2021
Date Data Arrived at EDR: 01/21/2021
Date Made Active in Reports: 01/28/2021
Number of Days to Update: 7

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/11/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 08/13/2020
Date Data Arrived at EDR: 08/13/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 71

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 01/11/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 07/31/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 80

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 12/09/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 10/19/2020
Date Data Arrived at EDR: 10/20/2020
Date Made Active in Reports: 01/12/2021
Number of Days to Update: 84

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 01/04/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 10/09/2020
Date Data Arrived at EDR: 10/09/2020
Date Made Active in Reports: 12/29/2020
Number of Days to Update: 81

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 01/12/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 08/17/2020
Date Made Active in Reports: 11/05/2020
Number of Days to Update: 80

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 01/11/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58
Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/18/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills
This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 42
Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 01/15/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory
A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58
Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/18/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory
A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58
Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/18/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 07/20/2020
Date Data Arrived at EDR: 10/09/2020
Date Made Active in Reports: 12/29/2020
Number of Days to Update: 81
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 01/12/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21
Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 10/07/2020
Next Scheduled EDR Contact: 01/25/2021
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 09/11/2020
Date Data Arrived at EDR: 10/07/2020
Date Made Active in Reports: 12/23/2020
Number of Days to Update: 77

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/10/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 12/21/2020
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 02/04/2021
Date Data Arrived at EDR: 02/09/2021
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 9

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 01/29/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 11/16/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/08/2021
Number of Days to Update: 77

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/3021
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 07/13/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 16

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 12/21/2020
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 10/26/2020
Date Data Arrived at EDR: 10/28/2020
Date Made Active in Reports: 01/15/2021
Number of Days to Update: 79

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 01/25/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 09/01/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 82

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 09/01/2020
Date Data Arrived at EDR: 11/06/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 81

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/05/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 09/01/2020
Date Data Arrived at EDR: 11/03/2020
Date Made Active in Reports: 01/21/2021
Number of Days to Update: 79

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/02/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 11/24/2020
Date Data Arrived at EDR: 11/24/2020
Date Made Active in Reports: 11/25/2020
Number of Days to Update: 1

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 10/06/2020
Date Data Arrived at EDR: 10/07/2020
Date Made Active in Reports: 11/03/2020
Number of Days to Update: 27

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/09/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 10/06/2020
Date Data Arrived at EDR: 10/07/2020
Date Made Active in Reports: 11/03/2020
Number of Days to Update: 27
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/09/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 12/30/2020
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/24/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/17/2020
Number of Days to Update: 78
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 12/30/2020
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 10/28/2020
Date Data Arrived at EDR: 10/30/2020
Date Made Active in Reports: 01/15/2021
Number of Days to Update: 77
Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 11/16/2020
Date Data Arrived at EDR: 11/18/2020
Date Made Active in Reports: 02/04/2021
Number of Days to Update: 78
Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 11/30/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/16/2021
Number of Days to Update: 77

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 03/03/2021
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/08/2021
Number of Days to Update: 77

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing

A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/14/2020
Date Data Arrived at EDR: 07/16/2020
Date Made Active in Reports: 09/29/2020
Number of Days to Update: 75

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 11/05/2020
Date Data Arrived at EDR: 11/06/2020
Date Made Active in Reports: 01/27/2021
Number of Days to Update: 82

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

LUST SAN FRANCISCO: Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/05/2020
Date Data Arrived at EDR: 11/06/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 81

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 12/09/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 11/12/2020
Date Data Arrived at EDR: 11/13/2020
Date Made Active in Reports: 02/01/2021
Number of Days to Update: 80

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/11/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/01/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 11/20/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/05/2021
Number of Days to Update: 74

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 82

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 05/16/2021
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 12/03/2020
Date Data Arrived at EDR: 12/03/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 77

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 12/15/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 12/23/2020
Number of Days to Update: 7

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 12/15/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 09/18/2020
Date Data Arrived at EDR: 09/22/2020
Date Made Active in Reports: 12/14/2020
Number of Days to Update: 83

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 12/15/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 10/06/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 77

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 01/11/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 11/23/2020
Date Data Arrived at EDR: 11/24/2020
Date Made Active in Reports: 02/10/2021
Number of Days to Update: 78

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 08/11/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/26/2020
Number of Days to Update: 75

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 10/14/2020
Date Data Arrived at EDR: 10/15/2020
Date Made Active in Reports: 01/05/2021
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 10/30/2020
Date Data Arrived at EDR: 11/03/2020
Date Made Active in Reports: 01/20/2021
Number of Days to Update: 78

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 09/28/2020
Date Data Arrived at EDR: 10/22/2020
Date Made Active in Reports: 01/12/2021
Number of Days to Update: 82
Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/02/2021
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/21/2020
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/08/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 09/28/2020
Date Data Arrived at EDR: 10/22/2020
Date Made Active in Reports: 01/12/2021
Number of Days to Update: 82
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 01/20/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 12/01/2020
Date Data Arrived at EDR: 12/08/2020
Date Made Active in Reports: 02/22/2021
Number of Days to Update: 76
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/08/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 12/21/2020
Date Data Arrived at EDR: 12/23/2020
Date Made Active in Reports: 01/04/2021
Number of Days to Update: 12
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 12/20/2020
Next Scheduled EDR Contact: 04/11/2021
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 01/26/2021
Date Data Arrived at EDR: 01/28/2021
Date Made Active in Reports: 02/03/2021
Number of Days to Update: 6

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 02/23/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 08/10/2020
Date Data Arrived at EDR: 10/20/2020
Date Made Active in Reports: 11/02/2020
Number of Days to Update: 13

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/12/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 01/08/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 01/29/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 01/11/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 02/24/2021
Number of Days to Update: 13

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/09/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 12/03/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

BCG RIALTO
1230 W DURST DRIVE
RIALTO, CA 92376

TARGET PROPERTY COORDINATES

Latitude (North):	34.095555 - 34° 5' 44.00''
Longitude (West):	117.395294 - 117° 23' 43.06''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	463535.4
UTM Y (Meters):	3772626.8
Elevation:	1232 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5619058 FONTANA, CA
Version Date:	2012
Southeast Map:	5620416 SAN BERNARDINO SOUTH, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

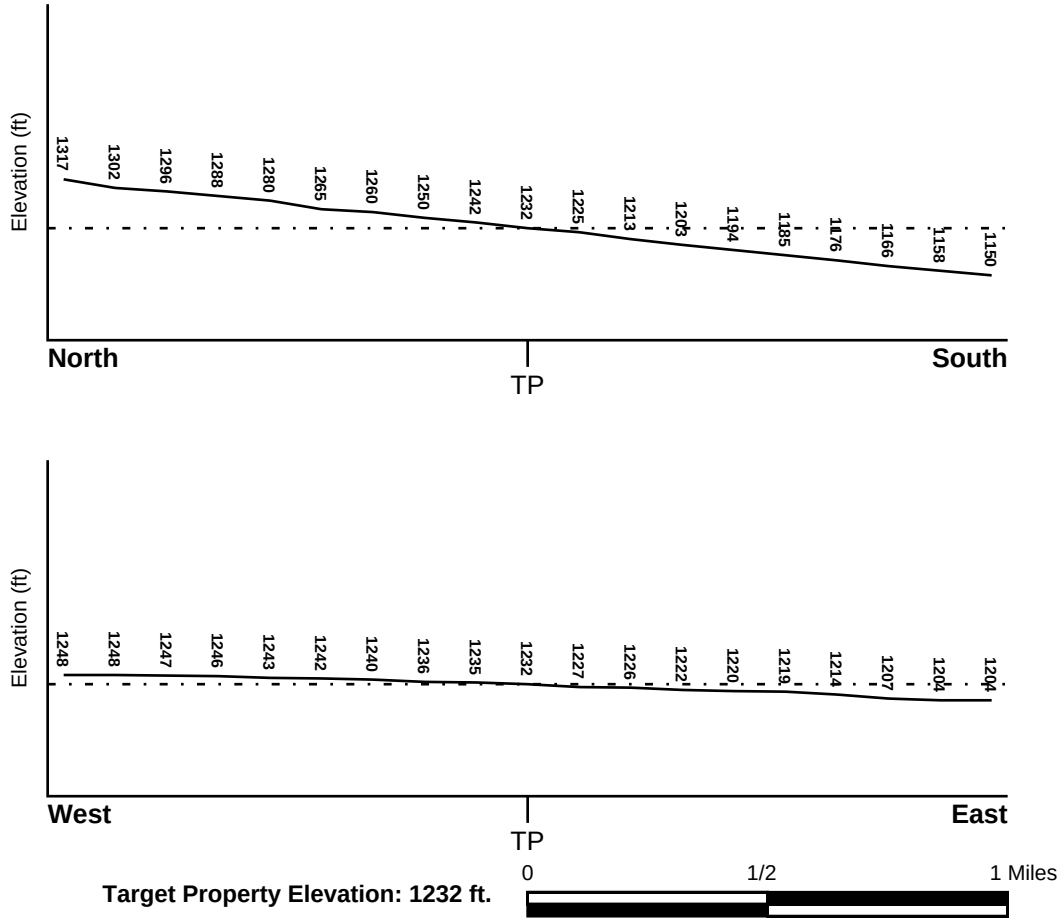
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06071C8657H	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06071C8656H	FEMA FIRM Flood data
06071C8658H	FEMA FIRM Flood data
06071C8659H	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
FONTANA	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Location Relative to TP:	1/2 - 1 Mile ENE
Site Name:	D&M DRUM CO
Site EPA ID Number:	CAT080010432
Groundwater Flow Direction:	Southeast
Inferred Depth to Water:	220 to 320 feet.
Hydraulic Connection:	The site is underlain by a single unconfined aquifer, the Rialto-Colton groundwater basin, which is likely recharged by Lytle Creek to the north. Ground water flow barriers exist to the north, east, and west of the basin.
Sole Source Aquifer:	No information about a sole source aquifer is available
Data Quality:	Information is inferred in the CERCLIS investigation report(s)

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site--specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

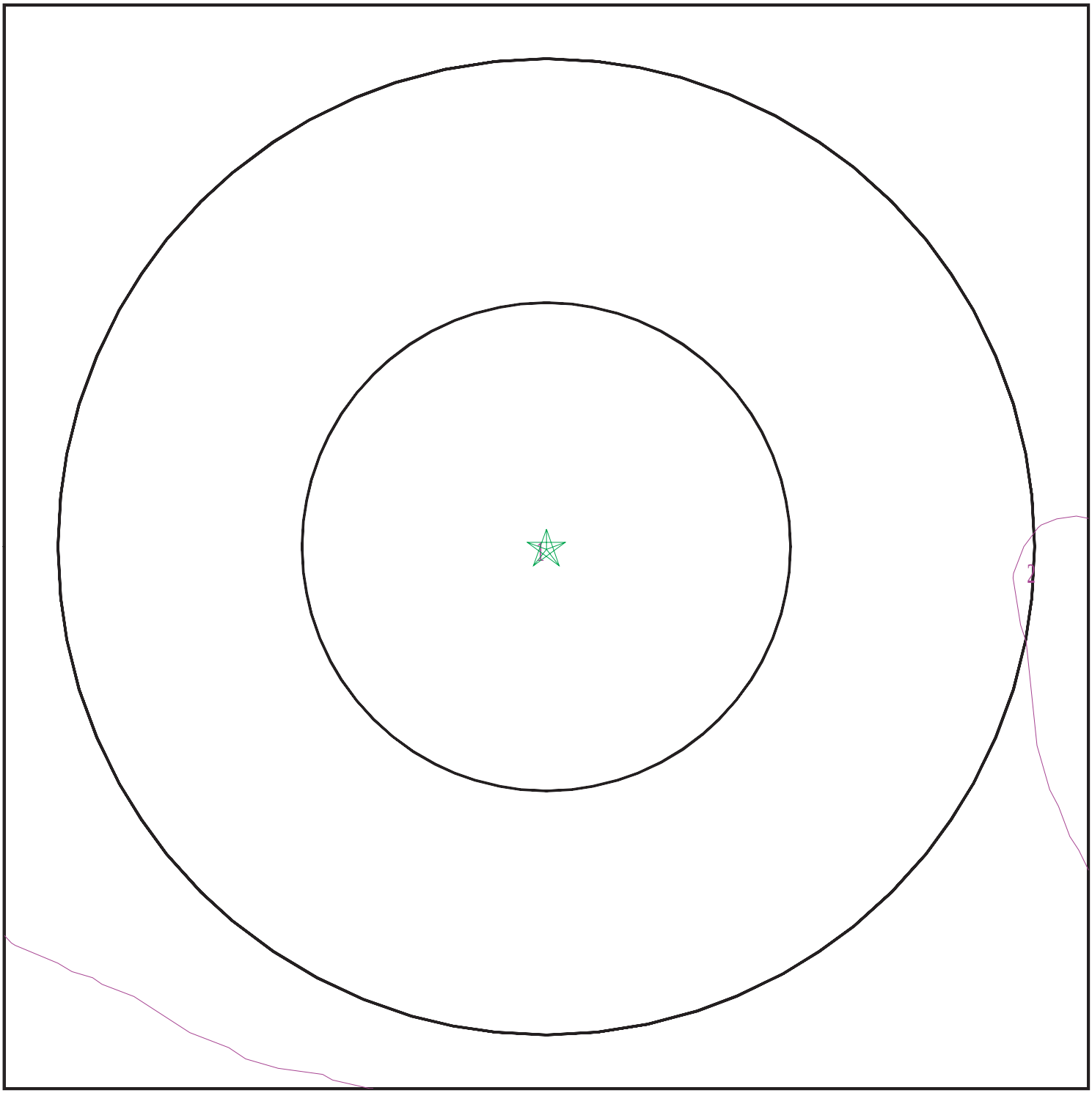
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 6393683.2s



SITE NAME:	BCG Rialto	CLIENT:	Roux Associates
ADDRESS:	1230 W Durst Drive Rialto CA 92376	CONTACT:	Connor Moore
		INQUIRY #:	6393683.2s
LAT/LONG:	34.095555 / 117.395294	DATE:	March 05, 2021 3:54 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: TUJUNGA

Soil Surface Texture: gravelly loamy sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	gravelly loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 6.1
2	18 inches	59 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 6.1

Soil Map ID: 2

Soil Component Name: Hanford

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 5.6
2	11 inches	59 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 5.6

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B4	USGS40000141044	1/2 - 1 Mile ENE
B6	USGS40000141038	1/2 - 1 Mile ENE
8	USGS40000140808	1/2 - 1 Mile SSE
C11	USGS40000141210	1/2 - 1 Mile North
D12	USGS40000140899	1/2 - 1 Mile WSW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

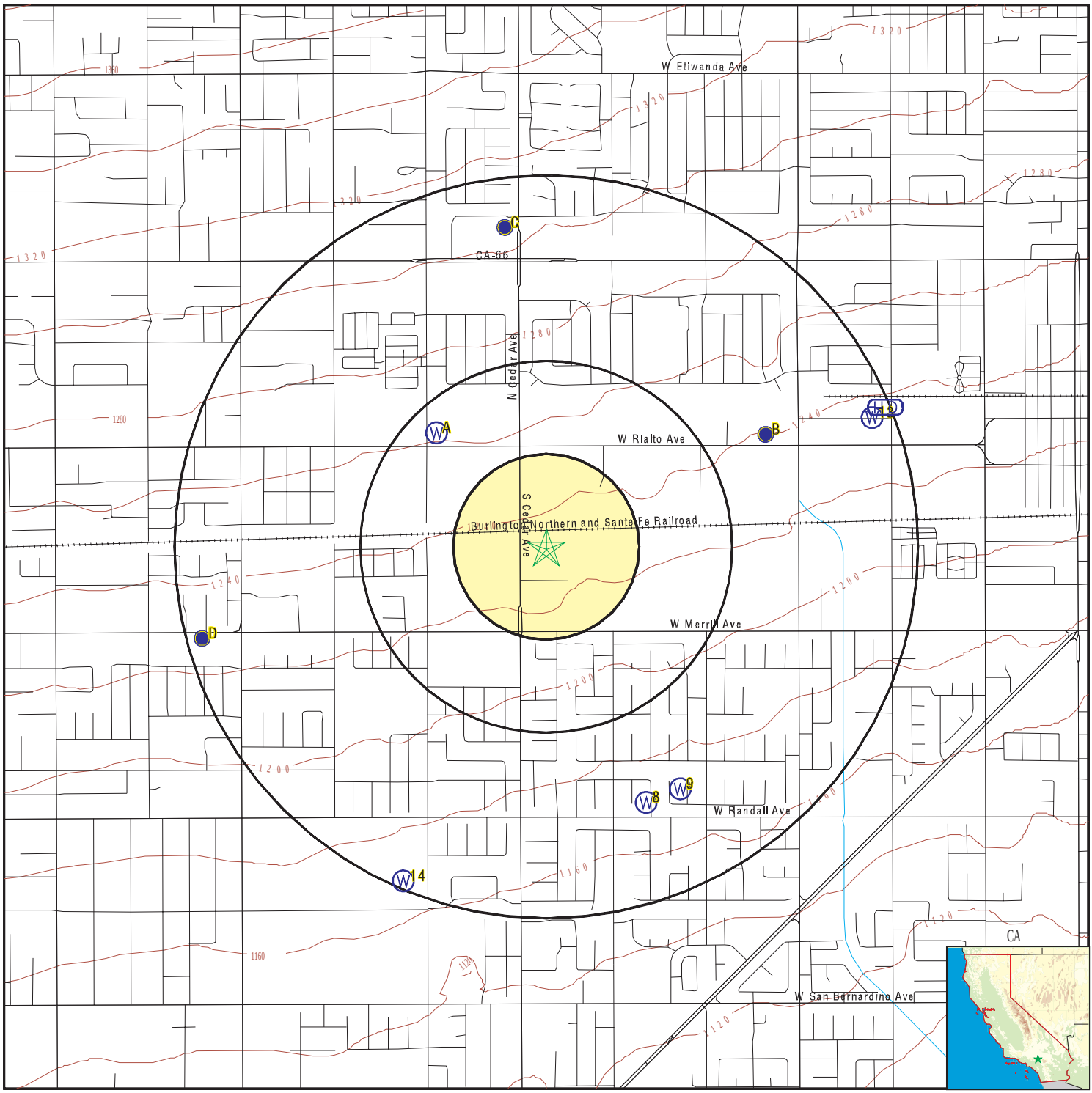
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	CADDW0000011121	1/4 - 1/2 Mile NW
A2	983	1/4 - 1/2 Mile NW
B3	CADDW0000013620	1/2 - 1 Mile ENE
B5	CAUSGSN00003881	1/2 - 1 Mile ENE
B7	993	1/2 - 1 Mile ENE
9	CADWR0000028958	1/2 - 1 Mile SSE
C10	CAUSGSN00003253	1/2 - 1 Mile North
13	CADWR0000034656	1/2 - 1 Mile ENE
14	CADWR0000003791	1/2 - 1 Mile SSW
D15	CADWR8000006740	1/2 - 1 Mile WSW

PHYSICAL SETTING SOURCE MAP - 6393683.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	BCG Rialto	CLIENT:	Roux Associates
ADDRESS:	1230 W Durst Drive Rialto CA 92376	CONTACT:	Connor Moore
		INQUIRY #:	6393683.2s
LAT/LONG:	34.095555 / 117.395294	DATE:	March 05, 2021 3:54 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
NW
1/4 - 1/2 Mile
Higher

CA WELLS **CADDW0000011121**

Well ID:	3610038-013	Well Type:	MUNICIPAL
Source:	Department of Health Services		
Other Name:	FOOTHILL TUDOR (RIALTO 07)- ABANDONED		
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=3610038-013&store_num=		
GeoTracker Data:	Not Reported		

A2
NW
1/4 - 1/2 Mile
Higher

CA WELLS **983**

Seq:	983	Prim sta c:	01S/05W-03N01 S
Frds no:	3610038013	County:	36
District:	13	User id:	TAN
System no:	3610038	Water type:	G
Source nam:	FOOTHILL TUDOR (RIALTO 07)	Station ty:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Latitude:	340600.0	Longitude:	1172400.0
Precision:	8	Status:	AR
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		
System no:	3610038	System nam:	Rialto-City
Hqname:	Not Reported	Address:	150 S PALM AVE
City:	RIALTO	State:	CA
Zip:	92376	Zip ext:	Not Reported
Pop serv:	48418	Connection:	11089
Area serve:	RIALTO		

B3
ENE
1/2 - 1 Mile
Higher

CA WELLS **CADDW0000013620**

Well ID:	3610038-015	Well Type:	MUNICIPAL
Source:	Department of Health Services		
Other Name:	RIALTO TUDOR (CHINO 01) - INACTIVE		
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=3610038-015&store_num=		
GeoTracker Data:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

B4
ENE
1/2 - 1 Mile
Higher

FED USGS **USGS40000141044**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	001S005W10H002S	Type:	Well
Description:	Not Reported	HUC:	18070203
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

B5
ENE
1/2 - 1 Mile
Higher

CA WELLS **CAUSGSN00003881**

Well ID:	USGS-340600117230401	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-340600117230401	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-340600117230401&store_num=		
GeoTracker Data:	Not Reported		

B6
ENE
1/2 - 1 Mile
Higher

FED USGS **USGS40000141038**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	001S005W10H001S	Type:	Well
Description:	Not Reported	HUC:	18070203
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	682
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

B7
ENE
1/2 - 1 Mile
Higher

CA WELLS **993**

Seq:	993	Prim sta c:	01S/05W-10H01 S
Frds no:	3610038015	County:	36
District:	13	User id:	TAN

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

System no:	3610038	Water type:	G
Source nam:	RIALTO TUDOR (CHINO 01)	Station ty:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Latitude:	340600.0	Longitude:	1172300.0
Precision:	8	Status:	AR
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		

System no:	3610038	System nam:	Rialto-City
Hqname:	Not Reported	Address:	150 S PALM AVE
City:	RIALTO	State:	CA
Zip:	92376	Zip ext:	Not Reported
Pop serv:	48418	Connection:	11089
Area serve:	RIALTO		

Sample date:	17-APR-14	Finding:	5.2
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		

Sample date:	14-MAR-14	Finding:	170.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		

Sample date:	14-MAR-14	Finding:	140.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		

Sample date:	14-MAR-14	Finding:	8.
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		

Sample date:	14-MAR-14	Finding:	370.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		

Sample date:	14-MAR-14	Finding:	0.3
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		

Sample date:	14-MAR-14	Finding:	19.
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		

Sample date:	14-MAR-14	Finding:	6.9
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		

Sample date:	14-MAR-14	Finding:	1.7
Chemical:	POTASSIUM	Report units:	MG/L
Dlr:	0.		

Sample date:	14-MAR-14	Finding:	31.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		

Sample date:	14-MAR-14	Finding:	4.7
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		

Sample date:	14-MAR-14	Finding:	290.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L

Dlr:	0.		
Sample date:	14-MAR-14	Finding:	170.
Chemical:	IRON	Report units:	UG/L
Dlr:	100.		
Sample date:	14-MAR-14	Finding:	2.4
Chemical:	CHROMIUM (TOTAL)	Report units:	UG/L
Dlr:	10.		
Sample date:	14-MAR-14	Finding:	4.7
Chemical:	ARSENIC	Report units:	UG/L
Dlr:	2.		
Sample date:	14-MAR-14	Finding:	130.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	14-MAR-14	Finding:	5.
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	14-MAR-14	Finding:	42.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	19-FEB-14	Finding:	0.168
Chemical:	RA-226 OR TOTAL RA BY 903.0 C.E.	Report units:	PCI/L
Dlr:	0.		
Sample date:	19-FEB-14	Finding:	7.8e-002
Chemical:	RA-226 FOR CWS OR TOTAL RA FOR NTNC BY 903.0		
Report units:	PCI/L	Dlr:	0.
Sample date:	19-FEB-14	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	19-FEB-14	Finding:	1.4
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	19-FEB-14	Finding:	0.544
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	19-FEB-14	Finding:	1.42
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	19-FEB-14	Finding:	0.363
Chemical:	RADIUM, TOTAL, MDA95-NTNC ONLY, BY 903.0		
Report units:	PCI/L	Dlr:	0.
Sample date:	21-JAN-14	Finding:	5.1
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	21-JAN-14	Finding:	0.46
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		

Sample date:	11-DEC-13	Finding:	0.3
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	20-NOV-13	Finding:	4.8
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	08-OCT-13	Finding:	6.7
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	11-SEP-13	Finding:	5.7
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	06-AUG-13	Finding:	5.2
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	09-JUL-13	Finding:	68.
Chemical:	SOURCE TEMPERATURE C	Report units:	C
Dlr:	0.		
Sample date:	09-JUL-13	Finding:	1.7
Chemical:	CHROMIUM, HEXAVALENT	Report units:	UG/L
Dlr:	1.		
Sample date:	09-JUL-13	Finding:	9.
Chemical:	VANADIUM	Report units:	UG/L
Dlr:	3.		
Sample date:	05-JUN-13	Finding:	20.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	05-JUN-13	Finding:	4.9
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	01-MAY-13	Finding:	4.8
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	17-APR-13	Finding:	4.7
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	17-APR-13	Finding:	20.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	13-MAR-13	Finding:	20.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	13-MAR-13	Finding:	0.51
Chemical:	TRICHLOROETHYLENE	Report units:	UG/L
Dlr:	0.5		
Sample date:	13-MAR-13	Finding:	6.1
Chemical:	PERCHLORATE	Report units:	UG/L

Dlr:	4.		
Sample date:	13-FEB-13	Finding:	2.7
Chemical:	CHROMIUM, HEXAVALENT	Report units:	UG/L
Dlr:	1.		
Sample date:	13-FEB-13	Finding:	9.9
Chemical:	VANADIUM	Report units:	UG/L
Dlr:	3.		
Sample date:	13-FEB-13	Finding:	4.7
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	16-JAN-13	Finding:	5.2
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	12-DEC-12	Finding:	5.7
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	12-DEC-12	Finding:	21.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	19-NOV-12	Finding:	5.3
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	09-OCT-12	Finding:	39.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	09-OCT-12	Finding:	4.3
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	11-SEP-12	Finding:	20.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	11-SEP-12	Finding:	5.
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	13-AUG-12	Finding:	4.9
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	18-JUL-12	Finding:	2.6
Chemical:	CHROMIUM, HEXAVALENT	Report units:	UG/L
Dlr:	1.		
Sample date:	18-JUL-12	Finding:	4.4
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	19-JUN-12	Finding:	4.3
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		

Sample date:	15-MAY-12	Finding:	4.4
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	15-MAY-12	Finding:	20.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	17-APR-12	Finding:	20.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	17-APR-12	Finding:	4.8
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	22-MAR-12	Finding:	4.9
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	24-FEB-12	Finding:	4.6
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	24-FEB-12	Finding:	9.2
Chemical:	VANADIUM	Report units:	UG/L
Dlr:	3.		
Sample date:	24-FEB-12	Finding:	2.6
Chemical:	CHROMIUM, HEXAVALENT	Report units:	UG/L
Dlr:	1.		
Sample date:	31-JAN-12	Finding:	4.9
Chemical:	PERCHLORATE	Report units:	UG/L
Dlr:	4.		
Sample date:	31-JAN-12	Finding:	20.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		

8
SSE **FED USGS** **USGS40000140808**
1/2 - 1 Mile
Lower

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	001S005W15G001S	Type:	Well
Description:	Not Reported	HUC:	18070203
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	620
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
9 **SSE** **1/2 - 1 Mile** **Lower**	**CA WELLS**	**CADWR0000028958**

Well ID:	01S05W15G001S	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	01S05W15G001S	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=01S05W15G001S&store_num=		
GeoTracker Data:	Not Reported		

	Database	EDR ID Number
C10 **North** **1/2 - 1 Mile** **Higher**	**CA WELLS**	**CAUSGSN00003253**

Well ID:	USGS-340629117234701	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-340629117234701	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-340629117234701&store_num=		
GeoTracker Data:	Not Reported		

	Database	EDR ID Number
C11 **North** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000141210**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	001S005W03N002S	Type:	Well
Description:	Not Reported	HUC:	18070203
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

	Database	EDR ID Number
D12 **WSW** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS40000140899**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	001S005W16C001S	Type:	Well
Description:	Not Reported	HUC:	18070203
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported

Construction Date:	19280620	Well Depth:	490
Well Depth Units:	ft	Well Hole Depth:	531
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	41	Level reading date:	2004-10-26
Feet below surface:	410.4	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	2004-04-19	Feet below surface:	408.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2003-10-20	Feet below surface:	407.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2003-04-22	Feet below surface:	406.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2002-10-29	Feet below surface:	405.04
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2002-04-10	Feet below surface:	403.32
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2001-10-24	Feet below surface:	401.74
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2001-04-16	Feet below surface:	400.94
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2000-10-23	Feet below surface:	399.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	2000-04-14	Feet below surface:	398.05
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1999-10-19	Feet below surface:	397.05
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1999-04-14	Feet below surface:	396.63
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1998-10-21	Feet below surface:	396.48
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1998-04-15	Feet below surface:	396.99
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1997-10-29	Feet below surface:	396.95
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1997-04-15	Feet below surface:	396.39
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1996-10-08	Feet below surface:	396.31
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1996-04-25	Feet below surface:	396.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1995-10-26	Feet below surface:	397.52
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1995-04-20	Feet below surface:	399.08
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1994-10-28	Feet below surface:	399.65
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1994-04-18	Feet below surface:	400.38
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1993-10-18	Feet below surface:	400.88
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1993-04-16	Feet below surface:	400.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1992-10-27	Feet below surface:	401.44
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1992-06-15	Feet below surface:	401.05
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1991-12-05	Feet below surface:	401.83
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1991-06-19	Feet below surface:	399.95
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1990-11-28	Feet below surface:	399.65
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1990-06-27	Feet below surface:	398.04
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1989-11-27	Feet below surface:	387.47
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1989-09-18	Feet below surface:	396.86
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1988-11-22	Feet below surface:	396.86
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1988-06-29	Feet below surface:	396.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1987-12-11	Feet below surface:	397.69
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1987-06-19	Feet below surface:	398.59
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1986-11-18	Feet below surface:	400.09
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1986-06-26	Feet below surface:	401.15
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1986-03-12	Feet below surface:	402.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-10-03	Feet below surface:	430.0
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1929-04-20	Feet below surface:	370.0
Feet to sea level:	Not Reported	Note:	Not Reported

13
ENE **CA WELLS** **CADWR0000034656**
1/2 - 1 Mile
Higher

Well ID:	01S05W11E001S	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	01S05W11E001S	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=01S05W11E001S&store_num=		
GeoTracker Data:	Not Reported		

14
SSW **CA WELLS** **CADWR0000003791**
1/2 - 1 Mile
Lower

Well ID:	01S05W16J001S	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	01S05W16J001S	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=01S05W16J001S&store_num=		
GeoTracker Data:	Not Reported		

D15
WSW **CA WELLS** **CADWR8000006740**
1/2 - 1 Mile
Lower

State Well #:	01S05W16C001S	Station ID:	3061
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Chino	Well Completion Rpt #:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92376	12	0

Federal EPA Radon Zone for SAN BERNARDINO County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for SAN BERNARDINO COUNTY, CA

Number of sites tested: 18

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.678 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

Groundwater Ambient Monitoring & Assessment Program
State Water Resources Control Board
Telephone: 916-341-5577
The GAMA Program is Californias comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Heath Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

PHYSICAL SETTING SOURCE RECORDS SEARCHED

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX G

Photographic Log



G-1. View of Site building, facing north (03/15/2021).



G-2. Former raw material storage area, facing north (03/15/2021).



G-3. Former office trailer location, facing west (03/15/2021).



G-4. Pad-mounted transformer, facing east (03/15/2021).



G-5. Former drum storage and AST area, facing east (03/15/2021).



G-6. Former finished product storage, facing north (03/15/2021).



G-7. Former washout trough and painting area, facing northeast (03/15/2021).



G-8. Former cement coaster location, facing east (03/15/2021).



G-9. Main entrance to former machine shop building (03/15/2021).



G-10. Former machine shop (03/15/2021).



G-11. Staining observed in northeastern portion of former machine shop (03/15/2021).



G-12. Rear area of former machine shop (03/15/2021).



G-13. Former washout trough location, facing north (03/15/2021).



G-14. Former painting area, facing west (03/15/2021).



G-15. Former cement coater location, facing northeast (03/15/2021).

APPENDIX H

Pertinent Historical Documentation

BCG Rialto
1230 W Durst Drive
Rialto, CA 92376

Inquiry Number: 6393683.7
March 08, 2021

EDR Environmental Lien and AUL Search

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

EDR Environmental Lien and AUL Search

The EDR Environmental Lien and AUL Search Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EDR Environmental Lien and AUL Search

TARGET PROPERTY INFORMATION

ADDRESS

1230 W Durst Drive
BCG Rialto
Rialto, CA 92376

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

AULs: Found ☐ Not Found ☒

RESEARCH SOURCE

Source 1:

San Bernardino Recorder
San Bernardino, CA

PROPERTY INFORMATION

Deed 1:

Type of Deed:	deed
Title is vested in:	1230 Durst LLC
Title received from:	Linda A Douglas Trustee
Deed Dated	11/16/2009
Deed Recorded:	12/1/2009
Book:	NA
Page:	na
Volume:	na
Instrument:	na
Docket:	NA
Land Record Comments:	
Miscellaneous Comments:	
Legal Description:	See Exhibit
Legal Current Owner:	1230 Durst LLC
Parcel # / Property Identifier:	012806225, 012806227
Comments:	See Exhibit

Deed 2:

Type of Deed:	deed
Title is vested in:	1230 Durst LLC
Title received from:	Linda A Douglas Trustee
Deed Dated	11/16/2009
Deed Recorded:	12/1/2009
Book:	NA
Page:	na
Volume:	na
Instrument:	na
Docket:	NA
Land Record Comments:	
Miscellaneous Comments:	
Legal Description:	See Exhibit
Legal Current Owner:	1230 Durst LLC
Parcel # / Property Identifier:	012806226
Comments:	See Exhibit

Deed Exhibit 1

WHEN RECORDED MAIL TO:
Richard E. Streza
BROWN & STREZA, LLP
8105 Irvine Center Drive, Suite 700
Irvine, CA 92618

MAIL TAX STATEMENTS TO:

1230 Durst, LLC
Linda A. Douglass
1047 Deborah Street
Upland, CA 91784

Recorded in Official Records, County of San Bernardino

LARRY WALKER
Auditor/Controller – Recorder

12/01/2009
4:27 PM
BN

P Counter

Doc#: 2009–0536559

Titles: 1 **Pages: 1**

Fees	9.00
Taxes	0.00
Other	1.00
PAID	$10.00

SPACE ABOVE THIS LINE FOR RECORDER'S USE

QUITCLAIM DEED

The undersigned Grantor declares:
Documentary Transfer Tax: $0/No consideration
The grantors and the grantees in this conveyance are comprised of the same parties who continue to hold the same proportionate interest in the property, R & T 11925(d).

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,
Linda A. Douglass, Trustee of the Linda A. Douglass Family Trust dated May 17, 2006

Does hereby REMISE, RELEASE AND FOREVER QUITCLAIM to:
1230 Durst, LLC, a California limited liability company

The following described real property in the City of Rialto, County of San Bernardino, State of California:
Parcel 3 and 5 of parcel Map No. 12285, as shown by Map on file in Book 150 Pages 70-71 of Parcel Maps Records of San Bernardino County, California

Subject to: All Covenants, Conditions, Restrictions, Reservations, Exceptions, Limitations, Uses, Rights, Rights of Way, Easements, and other matters of record.

Commonly known as: 1230 W. Durst Drive, Rialto, California
APN: 0128-062-25-0000 & 0128-062-27-0000

Dated: Nov. 16, 2009

Linda A. Douglass, Trustee of the Linda A. Douglass Family Trust dated May 17, 2006

By: Linda A. Douglass, Trustee
Linda A. Douglass, Trustee

State of California }
County of ~~Orange~~ } ss San Bernardino }

On November 16, 2009, before me, Lena Ancona, a Notary Public, personally appeared LINDA A. DOUGLASS, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he/she~~/they executed the same in ~~his~~/her/their authorized capacity(~~ies~~), and that by ~~his~~/her/their signature(~~s~~) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

LENA ANCONA
Commission # 1725243
Notary Public - California
San Bernardino County
My Comm. Expires Mar 11, 2011

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
Witness my hand and official seal.

Notary Signature

(This area for official notarial seal)

MAIL TAX STATEMENTS AS DIRECTED ABOVE

Deed Exhibit 2

WHEN RECORDED MAIL TO:
Richard E. Streza
BROWN & STREZA, LLP
8105 Irvine Center Drive, Suite 700
Irvine, CA 92618

MAIL TAX STATEMENTS TO:

1230 Durst, LLC
Linda A. Douglass
1047 Deborah Street
Upland, CA 91784

Recorded in Official Records, County of San Bernardino

LARRY WALKER
Auditor/Controller – Recorder

12/01/2009
4:27 PM
BN

P Counter

Doc#: 2009 – 0536558

Titles: 1 **Pages: 1**

Fees	9.00
Taxes	0.00
Other	1.00
PAID	$10.00

SPACE ABOVE THIS LINE FOR RECORDER'S USE

QUITCLAIM DEED

The undersigned Grantor declares:
Documentary Transfer Tax: $0/No consideration
The grantors and the grantees in this conveyance are comprised of the same parties who continue to hold the same proportionate interest in the property, R & T 11925(d).

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,
Linda A. Douglass, Trustee of the Linda A. Douglas Family Trust dated May 17, 2006

Do(es) hereby REMISE, RELEASE AND FOREVER QUITCLAIM to 1230 Durst, LLC, a California Limited Liability Company

The following described real property in the City of Rialto, County of San Bernardino, State of California:
Parcel 4 of Parcel Map 12885 in the City of Rialto, County of San Bernardino as per Map recorded in Book 150, Page(s) 70 & 71 of Maps, in the Office of the County Recorder of said County

Subject to: All Covenants, Conditions, Restrictions, Reservations, Exceptions, Limitations, Uses, Rights, Rights of Way, Easements, and other matters of record.

APN: 0128-062-26

Dated: Nov. 16, 2009

Linda A. Douglass, Trustee of the Linda A. Douglass Family Trust dated May 17, 2006

By: Linda A. Douglass, Trustee
Linda A. Douglass, Trustee

State of California }
County of San Bernardino } ss

On November 16, 2009, before me, Lena Ancona, a Notary Public, personally appeared LINDA A. DOUGLASS, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
Witness my hand and official seal.

LENA ANCONA
Commission # 1725243
Notary Public - California
San Bernardino County
My Comm. Expires Mar 11, 2011

(This area for official notarial seal)

Notary Signature

MAIL TAX STATEMENTS AS DIRECTED ABOVE

BCG Rialto
1230 W Durst Drive
Rialto, CA 92376

Inquiry Number: 6393683.8
March 05, 2021

EDR Building Permit Report

Target Property and Adjoining Properties

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EDR BUILDING PERMIT REPORT

About This Report

The EDR Building Permit Report provides a practical and efficient method to search building department records for indications of environmental conditions. Generated via a search of municipal building permit records gathered from more than 1,600 cities nationwide, this report will assist you in meeting the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

Building permit data can be used to identify current and/or former operations and structures/features of environmental concern. The data can provide information on a target property and adjoining properties such as the presence of underground storage tanks, pump islands, sumps, drywells, etc., as well as information regarding water, sewer, natural gas, electrical connection dates, and current/former septic tanks.

ASTM and EPA Requirements

ASTM E 1527-13 lists building department records as a "standard historical source," as detailed in § 8.3.4.7: "Building Department Records - The term building department records means those records of the local government in which the property is located indicating permission of the local government to construct, alter, or demolish improvements on the property." ASTM also states that "Uses in the area surrounding the property shall be identified in the report, but this task is required only to the extent that this information is revealed in the course of researching the property itself."

EPA's Standards and Practices for All Appropriate Inquires (AAI) states: "§312.24: Reviews of historical sources of information. (a) Historical documents and records must be reviewed for the purposes of achieving the objectives and performance factors of §312.20(e) and (f). Historical documents and records may include, but are not limited to, aerial photographs, fire insurance maps, building department records, chain of title documents, and land use records."

Methodology

EDR has developed the EDR Building Permit Report through our partnership with BuildFax, the nation's largest repository of building department records. BuildFax collects, updates, and manages building department records from local municipal governments. The database now includes 30 million permits, on more than 10 million properties across 1,600 cities in the United States.

The EDR Building Permit Report comprises local municipal building permit records, gathered directly from local jurisdictions, including both target property and adjoining properties. Years of coverage vary by municipality. Data reported includes (where available): date of permit, permit type, permit number, status, valuation, contractor company, contractor name, and description.

Incoming permit data is checked at seven stages in a regimented quality control process, from initial data source interview, to data preparation, through final auditing. To ensure the building department is accurate, each of the seven quality control stages contains, on average, 15 additional quality checks, resulting in a process of approximately 105 quality control "touch points."

For more information about the EDR Building Permit Report, please contact your EDR Account Executive at (800) 352-0050.

EDR® Environmental Data Resources Inc

BUILDFAX® PROPERTY HISTORY

EXECUTIVE SUMMARY: SEARCH DOCUMENTATION

A search of building department records was conducted by Environmental Data Resources, Inc (EDR) on behalf of Roux Associates on Mar 05, 2021.

TARGET PROPERTY

1230 W Durst Drive
Rialto, CA 92376

SEARCH METHODS

EDR searches available lists for both the Target Property and Surrounding Properties.

RESEARCH SUMMARY

Building permits identified: **YES**

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Rialto

Year	*Source*	*TP*	*Adjoining*
2020	City of Rialto, Building and Safety		
2019	City of Rialto, Building and Safety		X
2018	City of Rialto, Building and Safety		
2017	City of Rialto, Building and Safety		X
2016	City of Rialto, Building and Safety		X
2015	City of Rialto, Building and Safety		X
2014	City of Rialto, Building and Safety		X
2013	City of Rialto, Building and Safety		X
2012	City of Rialto, Building and Safety		X
	City of Rialto, Building and Safety	X	
2011	City of Rialto, Building and Safety		
2010	City of Rialto, Building and Safety		X
2009	City of Rialto, Building and Safety		
2008	City of Rialto, Building and Safety		X
2007	City of Rialto, Building and Safety		X
	City of Rialto, Building and Safety	X	
2006	City of Rialto, Building and Safety		X
	City of Rialto, Building and Safety	X	
2005	City of Rialto, Building and Safety		X
	City of Rialto, Building and Safety	X	
2004	City of Rialto, Building and Safety		
2003	City of Rialto, Building and Safety		X
2002	City of Rialto, Building and Safety		X
	City of Rialto, Building and Safety	X	
2001	City of Rialto, Building and Safety		X
	City of Rialto, Building and Safety	X	
2000	City of Rialto, Building and Safety		
1999	City of Rialto, Building and Safety		

EXECUTIVE SUMMARY: SEARCH DOCUMENTATION

Year	Source	TP	Adjoining
1998	City of Rialto, Building and Safety		
1997	City of Rialto, Building and Safety		
1996	City of Rialto, Building and Safety		
1995	City of Rialto, Building and Safety		
1994	City of Rialto, Building and Safety		
1993	City of Rialto, Building and Safety		
1992	City of Rialto, Building and Safety		
1991	City of Rialto, Building and Safety		
1990	City of Rialto, Building and Safety		
1989	City of Rialto, Building and Safety		
1988	City of Rialto, Building and Safety		
1987	City of Rialto, Building and Safety		
1986	City of Rialto, Building and Safety		
1985	City of Rialto, Building and Safety		
1984	City of Rialto, Building and Safety		
1983	City of Rialto, Building and Safety		
1982	City of Rialto, Building and Safety		
1981	City of Rialto, Building and Safety		

Name: JurisdictionName
Years: Years
Source: Source
Phone: Phone

BUILDING DEPARTMENT RECORDS SEARCHED

Name: Rialto
Years: 1981-2020
Source: City of Rialto, Building and Safety, RIALTO, CA
Phone: (909) 820-2505

Name: Redding
Years: 1926-2021
Source: City of Redding, Development Services, Building Division, SACRAMENTO, CA
Phone: 530-225-4014

Name: San Bernardino County
Years: 1970-2021
Source: San Bernardino County, Land Use, Building & Safety, NEWBERRY SPRINGS, CA
Phone: (909) 387-8311

TARGET PROPERTY FINDINGS

TARGET PROPERTY DETAIL

1230 W Durst Drive
Rialto, CA 92376

1230 W DURST DR

Date:	**11/29/2012**
Permit Type:	
Description:	**PERIMETER WALL (450' X 6'), 8" BLOCK (2700 SQ FT) (SOUTHLAND**
Permit Description:	**BLOCK WALLS - GARDEN**
Work Class:	
Proposed Use:	
Permit Number:	2012-2685
Status:	FINALED
Valuation:	$0.00
Contractor Company:	
Contractor Name:	MACIEL MASONRY

Date:	**11/16/2007**
Permit Type:	**bel**
Description:	**10 single head light standards PPD 1717R2 cancel @ applicant's request**
Permit Description:	**Electrical**
Work Class:	
Proposed Use:	
Permit Number:	2007-4021
Status:	canceled
Valuation:	$0.00
Contractor Company:	
Contractor Name:	

TARGET PROPERTY FINDINGS

Date:	**6/5/2007**
Permit Type:	**ind**
Description:	**conference, mechanical, will call & file rooms, break & reception areas, 12 offices, 3 restrooms (4,800) PPD 1717R2 cancel @ applicant's request**
Permit Description:	**New Industrial**
Work Class:	
Proposed Use:	
Permit Number:	2007-2216
Status:	canceled
Valuation:	$340,320.00
Contractor Company:	
Contractor Name:	

Date:	**2/22/2006**
Permit Type:	**bel**
Description:	**Upgrade panel from 800 A to 1200 A and install 200 A sub panel in fabrication shop.**
Permit Description:	**Electrical**
Work Class:	
Proposed Use:	
Permit Number:	2006-0491
Status:	final
Valuation:	$0.00
Contractor Company:	
Contractor Name:	BARWICK ELECTRIC

Date:	**6/28/2005**
Permit Type:	**bnc**
Description:	**240 sq ft utility/maintenance building w/208 sq ft overhang and exterior work area cancel @ applicant's request**
Permit Description:	**New Commercial**
Work Class:	
Proposed Use:	
Permit Number:	2005-2566
Status:	canceled
Valuation:	$12,229.76
Contractor Company:	
Contractor Name:	

TARGET PROPERTY FINDINGS

Date:	**1/10/2005**
Permit Type:	**bnc**
Description:	**Steel Fabrication Building ONLY (4990 Sq. Ft) PPD 1717**
Permit Description:	**New Commercial**
Work Class:	
Proposed Use:	
Permit Number:	2001-0968
Status:	final
Valuation:	$134,730.00
Contractor Company:	
Contractor Name:	PLUMMER THE PLUMBER

Date:	**5/8/2002**
Permit Type:	**bmh**
Description:	**ATF : Modular office set**
Permit Description:	**Mobile Home - Set**
Work Class:	
Proposed Use:	
Permit Number:	2002-0102
Status:	issued
Valuation:	$0.00
Contractor Company:	
Contractor Name:	

Date:	**1/23/2002**
Permit Type:	**bel**
Description:	**ATF PERMITS ELECTRICAL & PLUMBING**
Permit Description:	**Electrical**
Work Class:	
Proposed Use:	
Permit Number:	2002-0101
Status:	issued
Valuation:	$0.00
Contractor Company:	
Contractor Name:	

TARGET PROPERTY FINDINGS

Date:	**12/17/2001**
Permit Type:	**bel**
Description:	**ELECTRICAL EARLY POWER RELEASE**
Permit Description:	**Electrical**
Work Class:	
Proposed Use:	
Permit Number:	2001-1838
Status:	issued
Valuation:	$0.00
Contractor Company:	
Contractor Name:	

Date:	**12/10/2001**
Permit Type:	**bpl**
Description:	**Plumbing back flow for lawn sprinkler system**
Permit Description:	**Plumbing**
Work Class:	
Proposed Use:	
Permit Number:	2001-1718
Status:	issued
Valuation:	$0.00
Contractor Company:	
Contractor Name:	LIFESTYLE LAND SCAPES

Date:	**8/31/2001**
Permit Type:	**bbw**
Description:	**Perimeter Block Wall for Southland Pipe on the Cedar side & on the West side faceing the metrolink. (6210 sq. ft.)**
Permit Description:	**Block Wall - Garden**
Work Class:	
Proposed Use:	
Permit Number:	2001-1165
Status:	final
Valuation:	$31,608.90
Contractor Company:	
Contractor Name:	

ADJOINING PROPERTY FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

S CEDAR AVE

475 S CEDAR AVE

Date:	**8/15/2019**
Permit Type:	
Description:	**REPLACE EXISTING CAR WASH EQUPIMENT LIKE FOR LIKE**
Permit Description:	**TENANT IMPROVEMENT**
Work Class:	
Proposed Use:	
Permit Number:	BLD19-0637
Status:	FINALED
Valuation:	$0.00
Contractor Company:	
Contractor Name:	DUNMORE CONSTRUCTION ELECTRIC AND SONS

Date:	**7/13/2017**
Permit Type:	
Description:	**Change out 12 1/2T package unit A/C Commercial Use~Change out of 12 1/2 Ton package unite A/C like for like 200K BTU's Val. $19,000.00**
Permit Description:	**MECHANICAL**
Work Class:	
Proposed Use:	
Permit Number:	BLD17-1687
Status:	FINALED
Valuation:	$19,000.00
Contractor Company:	
Contractor Name:	AIRE RITE AIR CONDITIONING & REFRIGERATI

ADJOINING PROPERTY FINDINGS

Date: **3/18/2015**
Permit Type:
Description: **EXTERIOR WORK AT EXISTING GAS STATION, RESTRIPE HANDICPPED P DESCRIPTION: exterior work at existing gas station, restripe handicpped parking space, level floor area, val.$12,000 (CHEVRON)**

Permit Description: **MISCELLANEOUS**
Work Class:
Proposed Use:
Permit Number: 2015-0405
Status: FINALED
Valuation: $0.00
Contractor Company:
Contractor Name: WAYNE PERRY INC

Date: **9/20/2010**
Permit Type:
Description: **REFACE 4 CABINET SIGNS, 2 DOUBLE SIDED MONUMENT SIGNS "JACK**

Permit Description: **SIGN**
Work Class:
Proposed Use:
Permit Number: 2010-2155
Status: ISSUED
Valuation: $0.00
Contractor Company:
Contractor Name: CALIFORNIA NEON PRODUCTS

Date: **9/16/2010**
Permit Type:
Description: **5 new signs at the Jack in the Box, north, south , east and west elevations**

Permit Description: **Sign Approval**
Work Class:
Proposed Use:
Permit Number: 2010-2154
Status: pending
Valuation: $0.00
Contractor Company:
Contractor Name:

ADJOINING PROPERTY FINDINGS

Date:	**9/1/2010**
Permit Type:	
Description:	**REMODEL INTERIOR DINING AREA, RESTROOMS ADA COMPLIANT, OUTSI**
Permit Description:	**TENANT IMPROVEMENT**
Work Class:	
Proposed Use:	
Permit Number:	2010-1846
Status:	FINALED
Valuation:	$0.00
Contractor Company:	
Contractor Name:	CRAFT CONSTRUCTION COMPANY

Date:	**4/22/2008**
Permit Type:	**bel**
Description:	**install new ice cream machine & new dedicated circuit for 20amp**
Permit Description:	**Electrical**
Work Class:	
Proposed Use:	
Permit Number:	2008-1018
Status:	final
Valuation:	$0.00
Contractor Company:	
Contractor Name:	CLASSIC INSTALLS INC

Date:	**2/16/2007**
Permit Type:	**bsi**
Description:	**Repl 2 ill. channel letter canopy signs " Chevron" & 2 ill. logo canopy signs; reface 2 ill. monument signs; install 1 non-ill directional sign " Car Wash". Val $5750**
Permit Description:	**Sign Permit**
Work Class:	
Proposed Use:	
Permit Number:	2007-0582
Status:	final
Valuation:	$5,750.00
Contractor Company:	
Contractor Name:	SHINE ELECTRIC INC

ADJOINING PROPERTY FINDINGS

Date:	**1/31/2007**
Permit Type:	**sign**
Description:	**Signs for Jack in the Box Chevron and Car wash.**
Permit Description:	**Sign Approval**
Work Class:	
Proposed Use:	
Permit Number:	2007-0412
Status:	pending
Valuation:	$0.00
Contractor Company:	
Contractor Name:	

Date:	**7/1/2003**
Permit Type:	**bfire**
Description:	**installation of fire suppressant system, ansul hood & duct, Jack in the Box, commercial valuation $1600**
Permit Description:	**Fire Sprinklers, Alarms, Misc.**
Work Class:	
Proposed Use:	
Permit Number:	2003-1470
Status:	issued
Valuation:	$1,600.00
Contractor Company:	
Contractor Name:	

Date:	**5/12/2003**
Permit Type:	**bel**
Description:	**temporary power pole, 1-200 amp**
Permit Description:	**Electrical**
Work Class:	
Proposed Use:	
Permit Number:	2003-1070
Status:	final
Valuation:	$0.00
Contractor Company:	
Contractor Name:	

ADJOINING PROPERTY FINDINGS

Date: **4/7/2003**
Permit Type: **bnc**
Description: **3,900 sq ft free standing fuel canopy w/10 pumps PPD 1778**

Permit Description: **New Commercial**
Work Class:
Proposed Use:
Permit Number: 2002-1694
Status: final
Valuation: $63,570.00
Contractor Company:
Contractor Name: LINARDOS ENTERPRISES INC

Date: **4/7/2003**
Permit Type: **bnc**
Description: **721 sq ft carwash PPD 1778**

Permit Description: **New Commercial**
Work Class:
Proposed Use:
Permit Number: 2002-1695
Status: final
Valuation: $26,604.90
Contractor Company:
Contractor Name:

Date: **4/7/2003**
Permit Type: **bel**
Description: **light standards (13 single head and 4 double head) PPD 1778**

Permit Description: **Electrical**
Work Class:
Proposed Use:
Permit Number: 2003-0432
Status: final
Valuation: $0.00
Contractor Company:
Contractor Name: INLAND PAINTING

ADJOINING PROPERTY FINDINGS

Date:	**4/7/2003**
Permit Type:	**bbw**
Description:	**trash enclosure 56 x 6 = 336 sq ft. 8" block PPD 1778**
Permit Description:	**Block Wall - Garden**
Work Class:	
Proposed Use:	
Permit Number:	2003-0433
Status:	final
Valuation:	$1,710.24
Contractor Company:	
Contractor Name:	S J WEAVER CONTRACTING INC

Date:	**4/3/2003**
Permit Type:	**bnc**
Description:	**4,939 sq ft fast food restaurant and convienence store PPD 1778**
Permit Description:	**New Commercial**
Work Class:	
Proposed Use:	
Permit Number:	2002-1692
Status:	final
Valuation:	$435,125.90
Contractor Company:	
Contractor Name:	RANDY BOGS MASONRY INC

Date:	**3/11/2003**
Permit Type:	**bsi**
Description:	**2 multi tenant mon; 4 wall (Jack in the Box); 2 wall (Quickstuff); wall (Touchfree CarWash); dir cab (1 preview, 1 spkr stn, 2 enter, 1 drive thru, 1 carwash) all ill: 4 canopy (Citgo) non ill**
Permit Description:	**Sign Permit**
Work Class:	
Proposed Use:	
Permit Number:	2003-0410
Status:	final
Valuation:	$9,200.00
Contractor Company:	
Contractor Name:	CALIFORNIA NEON PRODUCTS

ADJOINING PROPERTY FINDINGS

W DURST DR

1251 W DURST DR

Date:	**12/27/2016**
Permit Type:	
Description:	**MODIFY EXISTING CELL SITE, INSTALL 3 NEW REMOTE RADIO UNIT~DESCRIPTION: modify existing cell site, install 3 new remote radio unit and one hybrid cable system to existing site, PPD 2492, $12000~val , (T-MOBILE)**
Permit Description:	**TENANT IMPROVEMENT**
Work Class:	
Proposed Use:	
Permit Number:	2016-3730
Status:	FINALED
Valuation:	$0.00
Contractor Company:	
Contractor Name:	

Date:	**9/9/2014**
Permit Type:	
Description:	**MISSION ENTERPRISES CORP. WAREHOUSE & DISTRIBUTION STEEL & DESCRIPTION: MISSION ENTERPRISES CORP. warehouse & distribution steel & metal BUILDING DEPARTMENT: P. SINGERMAN 10/08/2014 PLANNING DEPARTMENT: D. CASEY 09/09/2014 FIRE DEPARTMENT: T. JUNG 12/01/2014, MISSION ENTERPRISES CORP.**
Permit Description:	**CERTIFICATE OF OCCUPANCY**
Work Class:	
Proposed Use:	
Permit Number:	2014-2610
Status:	FINALED
Valuation:	$0.00
Contractor Company:	
Contractor Name:	

ADJOINING PROPERTY FINDINGS

Date: **5/1/2013**
Permit Type:
Description: **REPLACE MAIN SWITCH GEAR 2000AMP DUE TO VANDALISM**

Permit Description: **ELECTRICAL**
Work Class:
Proposed Use:
Permit Number: 2013-0965
Status: FINALED
Valuation: $0.00
Contractor Company:
Contractor Name:

Date: **11/16/2012**
Permit Type:
Description: **MODITY TO EXISTING TELECOMM FACILITY, REMOVE 6 EXISTING PANE**

Permit Description: **TENANT IMPROVEMENT**
Work Class:
Proposed Use:
Permit Number: 2012-2318
Status: FINALED
Valuation: $0.00
Contractor Company:
Contractor Name: WIRELESS ACCESS MANAGMENT COMU

Date: **7/31/2008**
Permit Type: **cdpmin**
Description: **Co-Location on existing mono-pine "AT&T"**

Permit Description: **Conditional Development Permit Minor**
Work Class:
Proposed Use:
Permit Number: 2008-2015
Status: pending
Valuation: $0.00
Contractor Company:
Contractor Name:

ADJOINING PROPERTY FINDINGS

Date:	**9/20/2007**
Permit Type:	**bti**
Description:	**Install warehouse storage racks, Valuation $92,800 (Solomon Colors, Inc.)**
Permit Description:	**Tenant Improvement**
Work Class:	
Proposed Use:	
Permit Number:	2007-2832
Status:	issued
Valuation:	$92,800.00
Contractor Company:	
Contractor Name:	

Date:	**8/16/2006**
Permit Type:	**cdpmin**
Description:	**CDP for co-location to existing monopine. Cingular Wlreless, CDP 523**
Permit Description:	**Conditional Development Permit Minor**
Work Class:	
Proposed Use:	
Permit Number:	2005-3369
Status:	final
Valuation:	$0.00
Contractor Company:	
Contractor Name:	

Date:	**7/1/2003**
Permit Type:	**bsi**
Description:	**non-illuminated channel letters, 45sq ft, " Solomon Colors", comercial, valuation $800.**
Permit Description:	**Sign Permit**
Work Class:	
Proposed Use:	
Permit Number:	2003-1454
Status:	final
Valuation:	$800.00
Contractor Company:	
Contractor Name:	QUIEL BROS ELECTRIC SIGN SERVICE CO INC

ADJOINING PROPERTY FINDINGS

Date: **6/26/2003**
Permit Type: **bel**
Description: **Motorized rolliing gate**

Permit Description: **Electrical**
Work Class:
Proposed Use:
Permit Number: 2002-0564
Status: final
Valuation: $2,000.00
Contractor Company:
Contractor Name: ROBERT CLAPPER CONSTRUCTION SE

Date: **6/26/2003**
Permit Type: **bel**
Description: **3 light standards (Valuation 3900)**

Permit Description: **Electrical**
Work Class:
Proposed Use:
Permit Number: 2002-0565
Status: final
Valuation: $0.00
Contractor Company:
Contractor Name: ROBERT CLAPPER CONSTRUCTION SE

Date: **5/12/2003**
Permit Type: **bti**
Description: **installation of pallet storage racks. $48,000 valuation**

Permit Description: **Tenant Improvement**
Work Class:
Proposed Use:
Permit Number: 2003-0399
Status: final
Valuation: $48,000.00
Contractor Company:
Contractor Name: STAR RACK INSTALLATION

ADJOINING PROPERTY FINDINGS

Date:	**4/15/2003**
Permit Type:	**bfire**
Description:	**FIRE ALARM / VALUATION 8,500.00**
Permit Description:	**Fire Sprinklers, Alarms, Misc.**
Work Class:	
Proposed Use:	
Permit Number:	2003-0792
Status:	issued
Valuation:	$3,500.00
Contractor Company:	
Contractor Name:	

Date:	**5/30/2002**
Permit Type:	**bti**
Description:	**wind screen only. This does not include the etched glass sign. Additional permit required.**
Permit Description:	**Tenant Improvement**
Work Class:	
Proposed Use:	
Permit Number:	2002-0498
Status:	final
Valuation:	$10,000.00
Contractor Company:	
Contractor Name:	ROBERT CLAPPER CONSTRUCTION SE

Date:	**5/2/2002**
Permit Type:	**bti**
Description:	**electric panels, power and mechanical for motor control room. $20,000 valuation**
Permit Description:	**Tenant Improvement**
Work Class:	
Proposed Use:	
Permit Number:	2002-0699
Status:	final
Valuation:	$20,000.00
Contractor Company:	
Contractor Name:	ROBERT CLAPPER CONSTRUCTION SE

ADJOINING PROPERTY FINDINGS

Date: **4/17/2002**
Permit Type: **brt**
Description: **Retaining Wall on privat 1600 sq ft**

Permit Description: **Retaining Wall**
Work Class:
Proposed Use:
Permit Number: 2002-0566
Status: final
Valuation: $16,500.73
Contractor Company:
Contractor Name: ROBERT CLAPPER CONSTRUCTION SE

Date: **4/15/2002**
Permit Type: **brt**
Description: **Cancelled - already generated.**

Permit Description: **Retaining Wall**
Work Class:
Proposed Use:
Permit Number: 2002-0743
Status: canceled
Valuation: $0.00
Contractor Company:
Contractor Name:

Date: **1/29/2002**
Permit Type: **bpl**
Description: **PLUMBING TIE INTO CITY DOMESTIC WATER ON SITE**

Permit Description: **Plumbing**
Work Class:
Proposed Use:
Permit Number: 2002-0104
Status: final
Valuation: $0.00
Contractor Company:
Contractor Name: ROBERT CLAPPER CONSTRUCTION SE

ADJOINING PROPERTY FINDINGS

Date: **1/22/2002**
Permit Type: **bpl**
Description: **Plumbing : Sewer into on site**

Permit Description: **Plumbing**
Work Class:
Proposed Use:
Permit Number: 2002-0097
Status: final
Valuation: $0.00
Contractor Company:
Contractor Name: ROBERT CLAPPER CONSTRUCTION SE

Date: **1/14/2002**
Permit Type: **bel**
Description: **INSTALLING A TEMP. POWER POLE**

Permit Description: **Electrical**
Work Class:
Proposed Use:
Permit Number: 2002-0060
Status: final
Valuation: $0.00
Contractor Company:
Contractor Name: POWER PLUS TEMPORARY UTILITY SERVICES

Date: **12/27/2001**
Permit Type: **bfire**
Description: **Installtion of a Fire Sprinkler System ($36,900)**

Permit Description: **Fire Sprinklers, Alarms, Misc.**
Work Class:
Proposed Use:
Permit Number: 2001-1863
Status: issued
Valuation: $36,900.00
Contractor Company:
Contractor Name: INTEGRITY FIRE SYSTEMS

ADJOINING PROPERTY FINDINGS

Date:	**10/3/2001**
Permit Type:	**bnc**
Description:	**CONCRETE TILT-UP BUILDING FOR THE FORMULATING OF CONCRETE COLORANTS. Office 5797 sq ft; Industrial 1560 sq ft; Warehouse 45,483 sq ft PPD 1735**
Permit Description:	**New Commercial**
Work Class:	
Proposed Use:	
Permit Number:	2001-1457
Status:	final
Valuation:	$1,833,996.30
Contractor Company:	
Contractor Name:	

W MERRILL AVE # A

1248 W MERRILL AVE # A

Date:	**4/26/2017**
Permit Type:	
Description:	**SIGN FOAM LETTERS, 28 sf~Wall Sign, foam letters 28 sf, 2 hached with 3m double stick tape & adhesive silicone, val $450.00**
Permit Description:	**SIGN**
Work Class:	
Proposed Use:	
Permit Number:	BLD17-0870
Status:	EXPIRED
Valuation:	$450.00
Contractor Company:	
Contractor Name:	

ADJOINING PROPERTY FINDINGS

Date: **11/8/2005**
Permit Type: **bbw**
Description: **on East and West sides 460 x 5 = 2,300 sq ft PPD 1776**

Permit Description: **Block Wall - Garden**
Work Class:
Proposed Use:
Permit Number: 2005-2416
Status: final
Valuation: $11,707.00
Contractor Company:
Contractor Name: S & S INVESTMENT INC

Date: **11/8/2005**
Permit Type: **bbw**
Description: **trash enclosure using part of W wall 105 sq ft PPD 1776**

Permit Description: **Block Wall - Garden**
Work Class:
Proposed Use:
Permit Number: 2005-2417
Status: final
Valuation: $534.45
Contractor Company:
Contractor Name: S & S INVESTMENT INC

Date: **11/8/2005**
Permit Type: **bel**
Description: **2 four head light standards PPD 1776**

Permit Description: **Electrical**
Work Class:
Proposed Use:
Permit Number: 2005-2418
Status: final
Valuation: $0.00
Contractor Company:
Contractor Name: S & S INVESTMENT INC

ADJOINING PROPERTY FINDINGS

Date:	**6/29/2005**
Permit Type:	**bnc**
Description:	**Unit 1 ice cream warehouse (2,522.5 sq ft), office, & 2 restrooms (277.5 sq ft); Unit 2 office and 2 restrooms (1,700 sq ft). PPD 1776**
Permit Description:	**New Commercial**
Work Class:	
Proposed Use:	
Permit Number:	2005-0429
Status:	final
Valuation:	$201,342.25
Contractor Company:	
Contractor Name:	S & S INVESTMENT INC

GLOSSARY

General Building Department concepts

- **ICC:** The International Code Council. The governing body for the building/development codes used by all jurisdictions who've adopted the ICC guidelines. MOST of the US has done this. Canada, Mexico, and other countries use ICC codes books and guides as well. There are a few states who have added guidelines to the ICC codes to better fit their needs. For example, California has added seismic retrofit requirements for most commercial structures.
- **Building Department (Permitting Authority, Building Codes, Inspections Department, Building and Inspections):** This is the department in a jurisdiction where an owner or contractor goes to obtain permits and inspections for building, tearing down, remodeling, adding to, re-roofing, moving or otherwise making changes to any structure, Residential or Commercial.
- **Jurisdiction:** This is the geographic area representing the properties over which a Permitting Authority has responsibility.
- **GC:** General Contractor. Usually the primary contractor hired for any Residential or Commercial construction work.
- **Sub:** Subordinate contracting companies or subcontractors. Usually a "trades" contractor working for the GC. These contractors generally have an area of expertise in which they are licensed like Plumbing, Electrical, Heating and Air systems, Gas Systems, Pools etc. (called "trades").
- **Journeymen:** Sub contractors who have their own personal licenses in one or more trades and work for different contracting companies, wherever they are needed or there is work.
- **HVAC (Mechanical, Heating & Air companies):** HVAC = Heating, Ventilation, and Air Conditioning.
- **ELEC (Electrical, TempPole, TPole, TPower, Temporary Power, Panel, AMP Change, Power Release):** Electrical permits can be pulled for many reasons. The most common reason is to increase the AMPs of power in an electrical power panel. This requires a permit in almost every jurisdiction. Other commons reason for Electrical permits is to insert a temporary power pole at a new construction site. Construction requires electricity, and in a new development, power has yet to be run to the lot. The temporary power pole is usually the very first permit pulled for new development. The power is released to the home owner when construction is complete and this sometimes takes the form of a Power Release permit or inspection.
- **"Pull" a permit:** To obtain and pay for a building permit.
- **CBO:** Chief Building Official
- **Planning Department:** The department in the development process where the building /structural plans are reviewed for their completeness and compliance with building codes
- **Zoning Department:** The department in the development process where the site plans are reviewed for their compliance with the regulations associated with the zoning district in which they are situated.
- **Zoning District:** A pre-determined geographic boundary within a jurisdiction where certain types of structures are permitted / prohibited. Examples are Residential structure, Commercial/Retail structures, Industrial/Manufacturing structures etc. Each zoning district has regulations associated with it like the sizes of the lots, the density of the structures on the lots, the number of parking spaces required for certain types of structures on the lots etc.
- **PIN (TMS, GIS ID, Parcel#):** Property Identification Number and Tax Map System number.
- **State Card (Business license):** A license card issued to a contractor to conduct business.
- **Building Inspector (Inspector):** The inspector is a building department employee that inspects building construction for compliance to codes.
- **C.O.:** Certificate of Occupancy. This is the end of the construction process and designates that the owners now have permission to occupy a structure after its building is complete. Sometimes also referred to as a Certificate of Compliance.

GLOSSARY

Permit Content Definitions

- Permit Number: The alphanumerical designation assigned to a permit for tracking within the building department system. Sometimes the permit number gives clues to its role, e.g. a "PL" prefix may designate a plumbing permit.
- Description: A field on the permit form that allows the building department to give a brief description of the work being done. More often than not, this is the most important field for EP's to find clues to the prior use(s) of the property.
- Permit Type: Generally a brief designation of the type of job being done. For example BLDG-RES, BLDG-COM, ELEC, MECH etc.

Sample Building Permit Data

Date: Nov 09, 2000
Permit Type: Bldg -
New Permit Number: 101000000405
Status: Valuation: $1,000,000.00
Contractor Company: OWNER-BUILDER
Contractor Name:

Description: New one store retail (SAV-ON) with drive-thru pharmacy. Certificate of Occupancy.

Water Quality Management Plan

For:

RIALTO COMMERCE CENTER

NEC OF CEDAR AVE. AND W DURST DR., RIALTO, CA. 92376

Prepared for:

AIREF RIALTO COMMERCE CENTER LP

4675 MacArthur Court, Suite 625

Newport Beach, California 92660

(949) 892-4900

Prepared by:

WestLAND Group, Inc.

4150 Concours, Suite 100

Ontario, CA, 91764

Submittal Date: JUNE 1, 2021

Revision Date:

Preliminary Entitlements Complete Date:

Contraction WQMP Complete Date:

Final WQMP (Post Construction) Approved Date:

Approval Date:_____

Project Owner's Certification

This Water Quality Management Plan (WQMP) has been prepared for BLACK CREEK GROUP by WestLAND Group, Inc.. The WQMP is intended to comply with the requirements of the City of Rialto and the NPDES Area wide Stormwater Program requiring the preparation of a WQMP. The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with San Bernardino County's Municipal Storm Water Management Program and the intent of the NPDES Permit for San Bernardino County and the incorporated cities of San Bernardino County within the Santa Ana Region. Once the undersigned transfers its interest in the property, its successors in interest and the city/county shall be notified of the transfer. The new owner will be informed of its responsibility under this WQMP. A copy of the approved WQMP shall be available on the subject site in perpetuity.

"I certify under a penalty of law that the provisions (implementation, operation, maintenance, and funding) of the WQMP have been accepted and that the plan will be transferred to future successors."

.

Project Data			
Permit/Application Number(s):	TBD	Grading Permit Number(s):	TBD
Tract/Parcel Map Number(s):	TBD	Building Permit Number(s):	TBD
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			APN 0128-062-25-0-000, 0128-062-26-0-000 and 0128-062-27-0-000

Owner's Signature			
Owner Name: Peter Schafer			
Title	Assistant Vice President, Development		
Company	AIREF RIALTO COMMERCE CENTER LP		
Address	4675 MacArthur Court, Suite 625, Newport Beach CA 92660		
Email	peter.schafer@blackcreekgroup.com		
Telephone #	(949) 892-4900		
Signature		Date	

Preparer's Certification

Project Data			
Permit/Application Number(s):		Grading Permit Number(s):	
Tract/Parcel Map Number(s):		Building Permit Number(s):	
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			APN: 0128-062-25-0-000, 0128-062-26-0-000 and 0128-062-27-0-000

"The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan were prepared under my oversight and meet the requirements of Regional Water Quality Control Board Order No. R8-2010-0036."

Engineer: Glenn M. Chung		PE Stamp Below
Title	Principal	
Company	WestLAND Group, Inc.	
Address	4150 Concours, Suite 100	
Email	gchung@westlandgroup.net	
Telephone #	(909) 989-9789	
Signature		
Date	6/1/2021	

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Section 1 Discretionary Permit(s)

Form 1-1 Project Information					
Project Name	8.9 Acre Industrial Site at 1230 Durst Dr., Rialto				
Project Owner Contact Name:	AIREF RIALTO COMMERCE CENTER LP / Peter Schafer				
Mailing Address:	4675 MacArthur Court, Suite 625 Newport Beach CA 92660	E-mail Address:	peter.schafer@blackcreekgroup.com	Telephone:	(949) 892-4900
Permit/Application Number(s):		Tract/Parcel Map Number(s):			
Additional Information/ Comments:	APN: 0128-062-25-0-000, 0128-062-26-0-000 and 0128-062-27-0-000				
Description of Project:	The proposed development includes an industrial building, with hardscape and landscape improvements, on an approximately 8.9 acres site. The site is located on a NEC of Cedar Avenue and Durst Drive in City of Rialto, County of San Bernardino, CA. The proposed lot would be approximately 88% impervious and would utilize CMP Underground Infiltration System for water quality compliance and detention. The system also is designed to mitigate the increased flow (high flow) and infiltrate the stormwater quality volume required runoff (low flow) for entire project site.				
Provide summary of Conceptual WQMP conditions (if previously submitted and approved). Attach complete copy.	n/a				

Section 2 Project Description

2.1 Project Information

This section of the WQMP should provide the information listed below. The information provided for Conceptual/ Preliminary WQMP should give sufficient detail to identify the major proposed site design and LID BMPs and other anticipated water quality features that impact site planning. Final Project WQMP must specifically identify all BMP incorporated into the final site design and provide other detailed information as described herein.

The purpose of this information is to help determine the applicable development category, pollutants of concern, watershed description, and long term maintenance responsibilities for the project, and any applicable water quality credits. This information will be used in conjunction with the information in Section 3, Site Description, to establish the performance criteria and to select the LID BMP or other BMP for the project or other alternative programs that the project will participate in, which are described in Section 4.

Form 2.1-1 Description of Proposed Project

1 Development Category (Select all that apply):

☒ Significant re-development involving the addition or replacement of 5,000 ft² or more of impervious surface on an already developed site	☐ New development involving the creation of 10,000 ft² or more of impervious surface collectively over entire site	☐ Automotive repair shops with standard industrial classification (SIC) codes 5013, 5014, 5541, 7532- 7534, 7536-7539	☐ Restaurants (with SIC code 5812) where the land area of development is 5,000 ft² or more
☐ Hillside developments of 5,000 ft² or more which are located on areas with known erosive soil conditions or where the natural slope is 25 percent or more	☐ Developments of 2,500 ft² of impervious surface or more adjacent to (within 200 ft) or discharging directly into environmentally sensitive areas or waterbodies listed on the CWA Section 303(d) list of impaired waters.	☒ Parking lots of 5,000 ft² or more exposed to storm water	☐ Retail gasoline outlets that are either 5,000 ft² or more, or have a projected average daily traffic of 100 or more vehicles per day

☐ Non-Priority / Non-Category Project *May require source control LID BMPs and other LIP requirements. Please consult with local jurisdiction on specific requirements*.

2 Project Area (ft2):	396,534	**3** Number of Dwelling Units:		**4** SIC Code:	4214

5 Is Project going to be phased? Yes ☐ No ☒ *If yes, ensure that the WQMP evaluates each phase as a distinct DA, requiring LID BMPs to address runoff at time of completion.*

6 Does Project include roads? Yes ☐ No ☒ *If yes, ensure that applicable requirements for transportation projects are addressed (see Appendix A of TGD for WQMP)*

2.2 Property Ownership/Management

Describe the ownership/management of all portions of the project and site. State whether any infrastructure will transfer to public agencies (City, County, Caltrans, etc.) after project completion. State if a homeowners or property owners association will be formed and be responsible for the long-term maintenance of project stormwater facilities. Describe any lot-level stormwater features that will be the responsibility of individual property owners.

Form 2.2-1 Property Ownership/Management

Describe property ownership/management responsible for long-term maintenance of WQMP stormwater facilities:

Property Owner:

Peter Schafer
4675 MacArthur Court, Suite 625
Newport Beach, California 92660
(949) 892-4911

Site to be managed and maintained by the Property Owner. This includes maintenance of all BMP's, catch basin inspections, maintenance of underground CMP Infiltration System, irrigation, and landscaping until the property is sold or transferred.

No infrastructure will be transferred to Public Agencies.

Refer to Section 5 of this report for the BMP Maintenance Guide.

2.3 Potential Stormwater Pollutants

Determine and describe expected stormwater pollutants of concern based on land uses and site activities (refer to Table 3-3 in the TGD for WQMP).

Form 2.3-1 Pollutants of Concern			
Pollutant	Please check: E=Expected, N=Not Expected		Additional Information and Comments
Pathogens (Bacterial / Virus)	E ☒	N ☐	Wild Birds & Pet Wast, Garbage
Nutrients - Phosphorous	E ☒	N ☐	Fertillizer, Food Waste & Garbage
Nutrients - Nitrogen	E ☒	N ☐	Fertillizer & Waste
Noxious Aquatic Plants	E ☐	N ☒	There is no Noxious Aquatic Plans on site
Sediment	E ☒	N ☐	Parking Lot, Driveway, Rooftope, Sidewalk & Landscape area
Metals	E ☒	N ☐	Trucks, Cars & Parking Area
Oil and Grease	E ☒	N ☐	Leaking Vehicles & Parking Area
Trash/Debris	E ☒	N ☐	Poorly Managed Trash Container & Parking Lot
Pesticides / Herbicides	E ☒	N ☐	Landscape Area
Organic Compounds	E ☒	N ☐	Trucks, Cars & Fertilizers
Other: Perolem & Hydrocarbones	E ☒	N ☐	Trucks & Cars
Other: Slvents	E ☒	N ☐	Trucks & Cars
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	

2.4 Water Quality Credits

A water quality credit program is applicable for certain types of development projects if it is not feasible to meet the requirements for on-site LID. Proponents for eligible projects, as described below, can apply for water quality credits that would reduce project obligations for selecting and sizing other treatment BMP or participating in other alternative compliance programs. Refer to Section 6.2 in the TGD for WQMP to determine if water quality credits are applicable for the project.

Form 2.4-1 Water Quality Credits

1 Project Types that Qualify for Water Quality Credits: *Select all that apply*

☐ Redevelopment projects that reduce the overall impervious footprint of the project site. [Credit = % impervious reduced]	Higher density development projects ☐ Vertical density [20%] ☐ 7 units/ acre [5%]	☐ Mixed use development, (combination of residential, commercial, industrial, office, institutional, or other land uses which incorporate design principles that demonstrate environmental benefits not realized through single use projects) [20%]	☐ Brownfield redevelopment (redevelop real property complicated by presence or potential of hazardous contaminants) [25%]
☐ Redevelopment projects in established historic district, historic preservation area, or similar significant core city center areas [10%]	☐ Transit-oriented developments (mixed use residential or commercial area designed to maximize access to public transportation) [20%]	☐ In-fill projects (conversion of empty lots & other underused spaces < 5 acres, substantially surrounded by urban land uses, into more beneficially used spaces, such as residential or commercial areas) [10%]	☐ Live-Work developments (variety of developments designed to support residential and vocational needs) [20%]

2 Total Credit % *(Total all credit percentages up to a maximum allowable credit of 50 percent)*

Description of Water Quality Credit Eligibility (if applicable)	N/A

Section 3 Site and Watershed Description

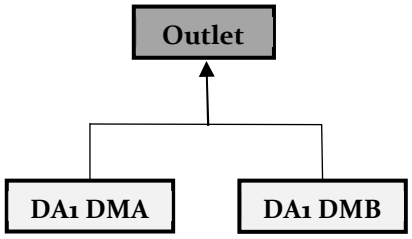
Describe the project site conditions that will facilitate the selection of BMP through an analysis of the physical conditions and limitations of the site and its receiving waters. Identify distinct drainage areas (DA) that collect flow from a portion of the site and describe how runoff from each DA (and sub-watershed DMAs) is conveyed to the site outlet(s). Refer to Section 3.2 in the TGD for WQMP. The form below is provided as an example. Then complete Forms 3.2 and 3.3 for each DA on the project site. ***If the project has more than one drainage area for stormwater management, then complete additional versions of these forms for each DA / outlet.***

Form 3-1 Site Location and Hydrologic Features

Site coordinates *take GPS measurement at approximate center of site*	Latitude 34D05'41"N	Longitude 117D23'45"W	Thomas Bros Map page

1 San Bernardino County climatic region: ☒ Valley ☐ Mountain

2 Does the site have more than one drainage area (DA): Yes☐ No☒ *If no, proceed to Form 3-2. If yes, then use this form to show a conceptual schematic describing DMAs and hydrologic feature connecting DMAs to the site outlet(s). An example is provided below that can be modified for proposed project or a drawing clearly showing DMA and flow routing may be attached*



Example only – modify for project specific WQMP using additional form

Conveyance	Briefly describe on-site drainage features to convey runoff that is not retained within a DMA
DA1 DMA A to Outlet 1	Runoff from the DMA A will surface drain through catch basins & storm drain pipes to the underground CMP detention/infiltration system, the overflow will be routed to Durst Drive through a new concrete channel and existing parkway drain at the south-east corner of the site.
DA1 DMA B to Outlet 2	Runoff from the DMA B will surface drain through catch basins & storm drain pipes to the new concrete channel then to Durst Drive through the existing parkway drain at the south-east corner of the site.
DA1 DMA C to Outlet 1	Runoff from the DMA C will surface drain to the new concrete channel then to Durst Drive through the existing parkway drain at the south-east corner of the site
DA1 DMA D	DMA D is landscape slope and does not create run-off

Form 3-2 Existing Hydrologic Characteristics for Drainage Area 1				
For Drainage Area 1's sub-watershed DMA, provide the following characteristics	DMA A	DMA B		
1 DMA drainage area (ft^2)	295,606	113,130		
2 Existing site impervious area (ft^2)	13,877	39,253		
3 Antecedent moisture condition *For desert areas, use http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_map.pdf*	2	2		
4 Hydrologic soil group *Refer to Watershed Mapping Tool – http://sbcounty.permitrack.com/WAP*	A	A		
5 Longest flowpath length (ft)	783'	440		
6 Longest flowpath slope (ft/ft)	2.1%	1.9%		
7 Current land cover type(s) *Select from Fig C-3 of Hydrology Manual*	Eroded- Graded	Eroded- Graded		
8 Pre-developed pervious area condition: *Based on the extent of wet season vegetated cover good >75%; Fair 50-75%; Poor <50% Attach photos of site to support rating*	Poor	Poor		

Form 3-3 Watershed Description for Drainage Area

Receiving waters *Refer to Watershed Mapping Tool - http://sbcounty.permitrack.com/WAP See 'Drainage Facilities" link at this website*	Rialto Channel Santa Ana River Reach 4 Santa Ana River Reach 3 Prado Basin Santa Ana River Reach 2 Santa Ana River Reach 1 Pacific Ocean
Applicable TMDLs *Refer to Local Implementation Plan*	Project Site: Nutrients, Metals, Oil, Trash & Debris Santa Ana Reach 4: none Santa Ana Reach 3: Nitrate, Pathogens Prado Basin: Pathogens Santa Ana Reach 2: None Santa Ana Reach 1: None
303(d) listed impairments *Refer to Local Implementation Plan and Watershed Mapping Tool – http://sbcounty.permitrack.com/WAP and State Water Resources Control Board website – http://www.waterboards.ca.gov/santaana/water_issues/programs/tmdl/index.shtml*	Santa Ana Reach 4: Pathogens Santa Ana Reach 3: Copper, Lead, Pathogens Prado Basin: None Santa Ana Reach 2: Indicator Bacteria Santa Ana Reach 1: None
Environmentally Sensitive Areas (ESA) *Refer to Watershed Mapping Tool – http://sbcounty.permitrack.com/WAP*	N/A
Unlined Downstream Water Bodies *Refer to Watershed Mapping Tool – http://sbcounty.permitrack.com/WAP*	Santa Ana River, Reach 4, 3, 2, 1
Hydrologic Conditions of Concern	☐ Yes *Complete Hydrologic Conditions of Concern (HCOC) Assessment. Include Forms 4.2-2 through Form 4.2-5 and Hydromodification BMP Form 4.3-10 in submittal* ☒ No
Watershed–based BMP included in a RWQCB approved WAP	☐ Yes *Attach verification of regional BMP evaluation criteria in WAP* • *More Effective than On-site LID* • *Remaining Capacity for Project DCV* • *Upstream of any Water of the US* • *Operational at Project Completion* • *Long-Term Maintenance Plan* • ☒ No

Section 4 Best Management Practices (BMP)

4.1 Source Control BMP

4.1.1 Pollution Prevention

Non-structural and structural source control BMP are required to be incorporated into all new development and significant redevelopment projects. Form 4.1-1 and 4.1-2 are used to describe specific source control BMPs used in the WQMP or to explain why a certain BMP is not applicable. Table 7-3 of the TGD for WQMP provides a list of applicable source control BMP for projects with specific types of potential pollutant sources or activities. The source control BMP in this table must be implemented for projects with these specific types of potential pollutant sources or activities.

The preparers of this WQMP have reviewed the source control BMP requirements for new development and significant redevelopment projects. The preparers have also reviewed the specific BMP required for project as specified in Forms 4.1-1 and 4.1-2. All applicable non-structural and structural source control BMP shall be implemented in the project.

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N1	Education of Property Owners, Tenants and Occupants on Stormwater BMPs	☒	☐	The property Owner should familiarize him/herself with this WQMP Document content, including BMP educational materials in Sections 5 & 6 of this WQMP Report and shall ensure that all site occupants are also familiar with it.
N2	Activity Restrictions	☒	☐	The Property Owner shall control the discharge of Storm water pollutants from the Site by restricting the activity and providing training for employees.
N3	Landscape Management BMPs	☒	☐	Maintenance shall be conducted by a Landscape Contractor on weekly basis to verify that the irrigation system is functioning properly and repairs (if needed) are performed. The Landscape Contractor should also verify that there are no leaks or run-off from landscape areas. Irrigation heads and system run time to be adjusted as needed to prevent overwatering of vegetation. Mowing and trimming to be performed on regular basis. Waste shall be properly removed from the site. Herbicides, pesticides and fertilizers shall be properly applied to prevent storm drain contamination.
N4	BMP Maintenance	☒	☐	The Owner (or his Maintenance Contractor) shall inspect all proposed BMPs on regular basis for any signs of erosion or sediment & debris built up. Those should be cleaned/repaired as needed (refer to Form 5-1 for BMPs Maintenance).
N5	Title 22 CCR Compliance (How development will comply)	☐	☒	On site storage of hazardous materials or waste, must comply with Title 22 CCR regulations.
N6	Local Water Quality Ordinances	☒	☐	The Owner shall comply with the City of Rialto Storm water Ordinance through the implementation of BMPs.
N7	Spill Contingency Plan	☐	☒	n/a
N8	Underground Storage Tank Compliance	☐	☒	n/a
N9	Hazardous Materials Disclosure Compliance	☐	☒	n/a

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N10	Uniform Fire Code Implementation	☒	☐	The site shall conform to the building code requirements for fire safety implementation and all fire code requirements, regardless of product stored.
N11	Litter/Debris Control Program	☒	☐	The owner shall be responsible for trash and litter to be swept from the site and dumped into a City approved dumpster with lids. The owner shall contract with the city of Ontario or local trash collector to empty dumpsters on a weekly basis. Additionally ground maintenance personnel shall police the grounds for any litter
N12	Employee Training	☒	☐	The owner will ensure that all employees are also familiar with onsite BMPs and necessary maintenance required by the tenants/ employees. Owner will check with the City and county at least once a year to obtain new updated educational materials and provide these materials to tenants/employees. Employees shall be trained to cleanup spills and participate in ongoing maintenance. The WQMP requires annual employee training and new hire training within 2 months.
N13	Housekeeping of Loading Docks	☒	☐	Keep the loading docks free of any clutter (cardboard, shrink wrap, production materials, and broken wooden pallets). Built time for dock housekeeping into each shift.
N14	Catch Basin Inspection Program	☒	☐	Catch basins shall be inspected semi-annually (by October 1st and February 1st), by owner's designee. Catch basin sumps shall be vacuumed when sediment or trash becomes 2-inches deep with proper disposal of waste solids. The owner shall clean all catch basins whenever debris, trash or sediment accumulates and shall investigate any suspected illegal dumping into those drains.
N15	Vacuum Sweeping of Private Streets and Parking Lots	☒	☐	The owner , through its landscape or other maintenance contractor, shall sweep all parking areas and drive aisles within the project every month, or more often as needed. Debris, sediment and trash picked up during sweeping operations shall be deposited off-site or in the on-site dumpster.
N16	Other Non-structural Measures for Public Agency Projects	☐	☒	No public agency projects associated, this is a private project
N17	Comply with all other applicable NPDES permits	☒	☐	Developer shall comply with California Statewide Construction General Permit during construction and all future Tenants shall comply with the requirements of the Statewide Industrial General Stormwater Permit.

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S1	Provide storm drain system stencilling and signage (CASQA New Development BMP Handbook SD-13)	☒	☐	A "No Dumping - Drains to River" stenceling shall be painted onto each basin inlet. Legibility of stencil will be maintained on n annual basis
S2	Design and construct outdoor material storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-34)	☐	☒	Outdoor Material Storage not planned.
S3	Design and construct trash and waste storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-32)	☐	☒	n/a
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control (Statewide Model Landscape Ordinance; CASQA New Development BMP Handbook SD-12)	☒	☐	The irrigation system will include devices, check valves, rain shutoff valves, pressure drop sensors, proper spacing, low preciptation emission devices and ET or weather based controllers. Landscape irrigation shall be consistent with the State Model Water Efficient Landscape Ordinance and City of Rialto Landscape Development Standards.
S5	Finish grade of landscaped areas at a minimum of 1-2 inches below top of curb, sidewalk, or pavement	☒	☐	Landscape areas will be depressed in order to increase retention of stormwater/irrigation water and promote infiltration, 1"- 2" below top of curb elevation or 1"- 2" below pavement elevations. Where the curb is not applicable or there is a zero face curb, landscape shall be installed 1"-2" below pavement elevation.
S6	Protect slopes and channels and provide energy dissipation (CASQA New Development BMP Handbook SD-10)	☐	☒	n/a
S7	Covered dock areas (CASQA New Development BMP Handbook SD-31)	☐	☒	n/a
S8	Covered maintenance bays with spill containment plans (CASQA New Development BMP Handbook SD-31)	☐	☒	Maintenance Bays not planned.
S9	Vehicle wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☐	☒	Owner will not allow Vehcle wash on this site.
S10	Covered outdoor processing areas (CASQA New Development BMP Handbook SD-36)	☐	☒	n/a

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S11	Equipment wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☐	☒	No equpment wash area on site. Owner will not allow outdoor processing area on this site
S12	Fueling areas (CASQA New Development BMP Handbook SD-30)	☐	☒	No fueling area onsite. Owner will not allow fueling area on this site.
S13	Hillside landscaping (CASQA New Development BMP Handbook SD-10)	☐	☒	No hillside on site
S14	Wash water control for food preparation areas	☐	☒	No food preparation area on site
S15	Community car wash racks (CASQA New Development BMP Handbook SD-33)	☐	☒	No community car wash racks on site

4.1.2 Preventative LID Site Design Practices

Site design practices associated with new LID requirements in the MS4 Permit should be considered in the earliest phases of a project. Preventative site design practices can result in smaller DCV for LID BMP and hydromodification control BMP by reducing runoff generation. Describe site design and drainage plan including:

- A narrative of site design practices utilized or rationale for not using practices
- A narrative of how site plan incorporates preventive site design practices
- Include an attached Site Plan layout which shows how preventative site design practices are included in WQMP

Refer to Section 5.2 of the TGD for WQMP for more details.

Form 4.1-3 Preventative LID Site Design Practices Checklist

Site Design Practices *If yes, explain how preventative site design practice is addressed in project site plan. If no, other LID BMPs must be selected to meet targets*
Minimize impervious areas: Yes ☒ No ☐ Explanation: Landscape areas are incorporated into the Site Plan design.
Maximize natural infiltration capacity: Yes ☐ No ☐ n/a Explanation: Runoff will be infiltrated using underground infiltration system.
Preserve existing drainage patterns and time of concentration: Yes ☐ No ☐n/a Explanation: The entire site is being redeveloped.
Disconnect impervious areas: Yes ☐ No ☐ n/a Explanation: Site runoff (low flow) will be collected in the underground infiltration system, and the high flow will be discharged to the off-site.
Protect existing vegetation and sensitive areas: Yes ☐ No ☐n/a Explanation: The entire site is being redeveloped.
Re-vegetate disturbed areas: Yes ☒ No ☐ Explanation: Areas not covered by pavement or building will be stabilized with landscape.
Minimize unnecessary compaction in stormwater retention/infiltration basin/trench areas: Yes ☐ No ☐ n/a Explanation: There are no retention/infiltration basins nor trenches proposed within the site.
Utilize vegetated drainage swales in place of underground piping or imperviously lined swales: Yes ☐ No ☒ Explanation: Vegetated swales are not proposed.
Stake off areas that will be used for landscaping to minimize compaction during construction : Yes ☒ No ☐n/a Explanation: Landscape areas will be staked to minimize unnecessary compaction during construction

4.2 Project Performance Criteria

The purpose of this section of the Project WQMP is to establish targets for post-development hydrology based on performance criteria specified in the MS4 Permit. These targets include runoff volume for water quality control (referred to as LID design capture volume), and runoff volume, time of concentration, and peak runoff for protection of any downstream waterbody segments with a HCOC. ***If the project has more than one outlet for stormwater runoff, then complete additional versions of these forms for each DA / outlet.***

Methods applied in the following forms include:

- For LID BMP Design Capture Volume (DCV), the San Bernardino County Stormwater Program requires use of the P_6 method (MS4 Permit Section XI.D.6a.ii) – Form 4.2-1
- For HCOC pre- and post-development hydrologic calculation, the San Bernardino County Stormwater Program requires the use of the Rational Method (San Bernardino County Hydrology Manual Section D). Forms 4.2-2 through Form 4.2-5 calculate hydrologic variables including runoff volume, time of concentration, and peak runoff from the project site pre- and post-development using the Hydrology Manual Rational Method approach. For projects greater than 640 acres (1.0 mi^2), the Rational Method and these forms should not be used. For such projects, the Unit Hydrograph Method (San Bernardino County Hydrology Manual Section E) shall be applied for hydrologic calculations for HCOC performance criteria.

Refer to Section 4 in the TGD for WQMP for detailed guidance and instructions.

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume (DA 1)

1 Project area DA 1 (ft^2): 396,162	**2** Imperviousness after applying preventative site design practices (Imp%): 88	**3** Runoff Coefficient (Rc): 0.70 *$R_c = 0.858(Imp\%)^{3}-0.78(Imp\%)^{2}+0.774(Imp\%)+0.04$*
4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr\text{-}1hr}$ (in): 0.586 *http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html*		
5 Compute P_6, Mean 6-hr Precipitation (inches): 0.87 *P_6 = Item 4 *C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Valley = 1.4807; Mountain = 1.909; Desert = 1.2371)*		
6 Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*		24-hrs ☐ 48-hrs ☒
7 Compute design capture volume, DCV (ft^3): 39,326 *DCV = 1/12 * [Item 1* Item 3 *Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)* *Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2*		

Form 4.2-2 Summary of HCOC Assessment (DA 1)

Does project have the potential to cause or contribute to an HCOC in a downstream channel: Yes ☐ No ☒

Go to: http://sbcounty.permitrack.com/WAP

If "Yes", then complete HCOC assessment of site hydrology for 2yr storm event using Forms 4.2-3 through 4.2-5 and insert results below

(Forms 4.2-3 through 4.2-5 may be replaced by computer software analysis based on the San Bernardino County Hydrology Manual)

If "No," then proceed to Section 4.3 Project Conformance Analysis

Condition	Runoff Volume (ft^3)	Time of Concentration (min)	Peak Runoff (cfs)
Pre-developed	**1** *Form 4.2-3 Item 12*	**2** *Form 4.2-4 Item 13*	**3** *Form 4.2-5 Item 10*
Post-developed	**4** *Form 4.2-3 Item 13*	**5** *Form 4.2-4 Item 14*	**6** *Form 4.2-5 Item 14*
Difference	**7** *Item 4 – Item 1*	**8** *Item 2 – Item 5*	**9** *Item 6 – Item 3*
Difference (as % of pre-developed)	**10** % *Item 7 / Item 1*	**11** % *Item 8 / Item 2*	**12** % *Item 9 / Item 3*

Form 4.2-3 HCOC Assessment for Runoff Volume (DA 1)

Weighted Curve Number Determination for: Pre-developed DA	DMA A	DMA B	DMA C	DMA D	DMA E	DMA F	DMA G	DMA H
1a Land Cover type								
2a Hydrologic Soil Group (HSG)								
3a DMA Area, ft^2 *sum of areas of DMA should equal area of DA*								
4a Curve Number (CN) *use Items 1 and 2 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								
Weighted Curve Number Determination for: Post-developed DA	DMA A	DMA B	DMA C	DMA D	DMA E	DMA F	DMA G	DMA H
1b Land Cover type								
2b Hydrologic Soil Group (HSG)								
3b DMA Area, ft^2 *sum of areas of DMA should equal area of DA*								
4b Curve Number (CN) *use Items 5 and 6 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								

5 Pre-Developed area-weighted CN:	**7** Pre-developed soil storage capacity, S (in): *S = (1000 / Item 5) - 10*	**9** Initial abstraction, I_a (in): *I_a = 0.2 * Item 7*
6 Post-Developed area-weighted CN:	**8** Post-developed soil storage capacity, S (in): *S = (1000 / Item 6) - 10*	**10** Initial abstraction, I_a (in): *I_a = 0.2 * Item 8*

11 Precipitation for 2 yr, 24 hr storm (in):
Go to: http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html

12 Pre-developed Volume (ft^3):
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 9)^2 / ((Item 11 – Item 9 + Item 7)*

13 Post-developed Volume (ft^3):
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 10)^2 / ((Item 11 – Item 10 + Item 8)*

14 Volume Reduction needed to meet HCOC Requirement, (ft^3):
*V_{HCOC} = (Item 13 * 0.95) – Item 12*

Form 4.2-4 HCOC Assessment for Time of Concentration (DA 1)

Compute time of concentration for pre and post developed conditions for each DA *(For projects using the Hydrology Manual complete the form below)*

Variables	Pre-developed DA1 *Use additional forms if there are more than 4 DMA*				Post-developed DA1 *Use additional forms if there are more than 4 DMA*			
	DMA A	DMA B	DMA C	DMA D	DMA A	DMA B	DMA C	DMA D
1 Length of flowpath (ft) *Use Form 3-2 Item 5 for pre-developed condition*								
2 Change in elevation (ft)								
3 Slope (ft/ft), S_o *= Item 2 / Item 1*								
4 Land cover								
5 Initial DMA Time of Concentration (min) *Appendix C-1 of the TGD for WQMP*								
6 Length of conveyance from DMA outlet to project site outlet (ft) *May be zero if DMA outlet is at project site outlet*								
7 Cross-sectional area of channel (ft^2)								
8 Wetted perimeter of channel (ft)								
9 Manning's roughness of channel (n)								
10 Channel flow velocity (ft/sec) V_{fps} *= (1.49 / Item 9) * (Item 7/Item 8)^0.67 * (Item 3)^0.5*								
11 Travel time to outlet (min) T_t *= Item 6 / (Item 10 * 60)*								
12 Total time of concentration (min) T_c *= Item 5 + Item 11*								
13 Pre-developed time of concentration (min): *Minimum of Item 12 pre-developed DMA*								
14 Post-developed time of concentration (min): *Minimum of Item 12 post-developed DMA*								
15 Additional time of concentration needed to meet HCOC requirement (min): $T_{C\text{-}HCOC}$ *= (Item 13 * 0.95) – Item 14*								

Form 4.2-5 HCOC Assessment for Peak Runoff (DA 1)

Compute peak runoff for pre- and post-developed conditions

Variables		Pre-developed DA to Project Outlet (*Use additional forms if more than 3 DMA)*			Post-developed DA to Project Outlet (*Use additional forms if more than 3 DMA)*		
		DMA A	DMA B	DMA C	DMA A	DMA B	DMA C
1 Rainfall Intensity for storm duration equal to time of concentration *I_{peak} = 10^(LOG Form 4.2-1 Item 4 - 0.6 LOG Form 4.2-4 Item 5 /60)*							
2 Drainage Area of each DMA (Acres) *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
3 Ratio of pervious area to total area *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
4 Pervious area infiltration rate (in/hr) *Use pervious area CN and antecedent moisture condition with Appendix C-3 of the TGD for WQMP*							
5 Maximum loss rate (in/hr) *F_m = Item 3 * Item 4* *Use area-weighted F_m from DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
6 Peak Flow from DMA (cfs) *Q_p =Item 2 * 0.9 * (Item 1 - Item 5)*							
7 Time of concentration adjustment factor for other DMA to site discharge point *Form 4.2-4 Item 12 DMA / Other DMA upstream of site discharge point (If ratio is greater than 1.0, then use maximum value of 1.0)*	DMA A	*n/a*			*n/a*		
	DMA B		*n/a*			*n/a*	
	DMA C			*n/a*			*n/a*

8 Pre-developed Q_p at T_c for DMA A: *Q_p = Item 6_{DMAA} + [Item 6_{DMAB} * (Item 1_{DMAA} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAA/2}$] + [Item 6_{DMAC} * (Item 1_{DMAA} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAA/3}$]*	**9** Pre-developed Q_p at T_c for DMA B: *Q_p = Item 6_{DMAB} + [Item 6_{DMAA} * (Item 1_{DMAB} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAB/1}$] + [Item 6_{DMAC} * (Item 1_{DMAB} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAB/3}$]*	**10** Pre-developed Q_p at T_c for DMA C: *Q_p = Item 6_{DMAC} + [Item 6_{DMAA} * (Item 1_{DMAC} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAC/1}$] + [Item 6_{DMAB} * (Item 1_{DMAC} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAC/2}$]*
10 Peak runoff from pre-developed condition confluence analysis (cfs):	*Maximum of Item 8, 9, and 10 (including additional forms as needed)*	
11 Post-developed Q_p at T_c for DMA A: *Same as Item 8 for post-developed values*	**12** Post-developed Q_p at T_c for DMA B: *Same as Item 9 for post-developed values*	**13** Post-developed Q_p at T_c for DMA C: *Same as Item 10 for post-developed values*
14 Peak runoff from post-developed condition confluence analysis (cfs):	*Maximum of Item 11, 12, and 13 (including additional forms as needed)*	
15 Peak runoff reduction needed to meet HCOC Requirement (cfs):	$Q_{p\text{-}HCOC}$ = *(Item 14 * 0.95) – Item 10*	

4.3 Project Conformance Analysis

Complete the following forms for each project site DA to document that the proposed LID BMPs conform to the project DCV developed to meet performance criteria specified in the MS4 Permit (WQMP Template Section 4.2). For the LID DCV, the forms are ordered according to hierarchy of BMP selection as required by the MS4 Permit (see Section 5.3.1 in the TGD for WQMP). The forms compute the following for on-site LID BMP:

- Site Design and Hydrologic Source Controls (Form 4.3-2)
- Retention and Infiltration (Form 4.3-3)
- Harvested and Use (Form 4.3-4) or
- Biotreatment (Form 4.3-5).

At the end of each form, additional fields facilitate the determination of the extent of mitigation provided by the specific BMP category, allowing for use of the next category of BMP in the hierarchy, if necessary.

The first step in the analysis, using Section 5.3.2.1 of the TGD for WQMP, is to complete Forms 4.3-1 and 4.3-3) to determine if retention and infiltration BMPs are infeasible for the project. For each feasibility criterion in Form 4.3-1, if the answer is "Yes," provide all study findings that includes relevant calculations, maps, data sources, etc. used to make the determination of infeasibility.

Next, complete Forms 4.3-2 and 4.3-4 to determine the feasibility of applicable HSC and harvest and use BMPs, and, if their implementation is feasible, the extent of mitigation of the DCV.

If no site constraints exist that would limit the type of BMP to be implemented in a DA, evaluate the use of combinations of LID BMPs, including all applicable HSC BMPs to maximize on-site retention of the DCV. If no combination of BMP can mitigate the entire DCV, implement the single BMP type, or combination of BMP types, that maximizes on-site retention of the DCV within the minimum effective area.

If the combination of LID HSC, retention and infiltration, and harvest and use BMPs are unable to mitigate the entire DCV, then biotreatment BMPs may be implemented by the project proponent. If biotreatment BMPs are used, then they must be sized to provide sufficient capacity for effective treatment of the remainder of the volume-based performance criteria that cannot be achieved with LID BMPs (TGD for WQMP Section 5.4.4.2). **Under no circumstances shall any portion of the DCV be released from the site without effective mitigation and/or treatment**.

Form 4.3-1 Infiltration BMP Feasibility (DA 1)

Feasibility Criterion – Complete evaluation for each DA on the Project Site

1 Would infiltration BMP pose significant risk for groundwater related concerns? Yes ☐ No ☒

Refer to Section 5.3.2.1 of the TGD for WQMP

If Yes, Provide basis: (attach)

2 Would installation of infiltration BMP significantly increase the risk of geotechnical hazards? Yes ☐ No ☒

(Yes, if the answer to any of the following questions is yes, as established by a geotechnical expert):

- The location is less than 50 feet away from slopes steeper than 15 percent
- The location is less than eight feet from building foundations or an alternative setback.
- A study certified by a geotechnical professional or an available watershed study determines that stormwater infiltration would result in significantly increased risks of geotechnical hazards.

If Yes, Provide basis: (attach)

3 Would infiltration of runoff on a Project site violate downstream water rights? Yes ☐ No ☒

If Yes, Provide basis: (attach)

4 Is proposed infiltration facility located on hydrologic soil group (HSG) D soils or does the site geotechnical investigation indicate presence of soil characteristics, which support categorization as D soils? Yes ☐ No ☒

If Yes, Provide basis: (attach)

5 Is the design infiltration rate, after accounting for safety factor of 2.0, below proposed facility less than 0.3 in/hr (accounting for soil amendments)? Yes ☐ No ☒

If Yes, Provide basis: (attach)

6 Would on-site infiltration or reduction of runoff over pre-developed conditions be partially or fully inconsistent with watershed management strategies as defined in the WAP, or impair beneficial uses? Yes ☐ No ☒

See Section 3.5 of the TGD for WQMP and WAP

If Yes, Provide basis: (attach)

7 Any answer from Item 1 through Item 3 is "Yes": Yes ☐ No ☒

If yes, infiltration of any volume is not feasible onsite. Proceed to Form 4.3-4, Harvest and Use BMP. If no, then proceed to Item 8 below.

8 Any answer from Item 4 through Item 6 is "Yes": Yes ☐ No ☒

If yes, infiltration is permissible but is not required to be considered. Proceed to Form 4.3-2, Hydrologic Source Control BMP.
If no, then proceed to Item 9, below.

9 All answers to Item 1 through Item 6 are "No":

Infiltration of the full DCV is potentially feasible, LID infiltration BMP must be designed to infiltrate the full DCV to the MEP.
Proceed to Form 4.3-2, Hydrologic Source Control BMP.

4.3.1 Site Design Hydrologic Source Control BMP

Section XI.E. of the Permit emphasizes the use of LID preventative measures; and the use of LID HSC BMPs reduces the portion of the DCV that must be addressed in downstream BMPs. Therefore, all applicable HSC shall be provided except where they are mutually exclusive with each other, or with other BMPs. Mutual exclusivity may result from overlapping BMP footprints such that either would be potentially feasible by itself, but both could not be implemented. Please note that while there are no numeric standards regarding the use of HSC, if a project cannot feasibly meet BMP sizing requirements or cannot fully address HCOCs, feasibility of all applicable HSC must be part of demonstrating that the BMP system has been designed to retain the maximum feasible portion of the DCV. Complete Form 4.3-2 to identify and calculate estimated retention volume from implementing site design HSC BMP. Refer to Section 5.4.1 in the TGD for more detailed guidance.

Form 4.3-2 Site Design Hydrologic Source Control BMPs (DA 1)

1 Implementation of Impervious Area Dispersion BMP (i.e. routing runoff from impervious to pervious areas), excluding impervious areas planned for routing to on-lot infiltration BMP: Yes ☐ No ☒ *If yes, complete Items 2-5; If no, proceed to Item 6*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Total impervious area draining to pervious area (ft^2)			
3 Ratio of pervious area receiving runoff to impervious area			
4 Retention volume achieved from impervious area dispersion (ft^3) *V = Item2 * Item 3 * (0.5/12), assuming retention of 0.5 inches of runoff*			
5 Sum of retention volume achieved from impervious area dispersion (ft^3):	$V_{retention}$ *=Sum of Item 4 for all BMPs*		
6 Implementation of Localized On-lot Infiltration BMPs (e.g. on-lot rain gardens): Yes ☐ No ☒ *If yes, complete Items 7-13 for aggregate of all on-lot infiltration BMP in each DA; If no, proceed to Item 14*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
7 Ponding surface area (ft^2)			
8 Ponding depth (ft)			
9 Surface area of amended soil/gravel (ft^2)			
10 Average depth of amended soil/gravel (ft)			
11 Average porosity of amended soil/gravel			
12 Retention volume achieved from on-lot infiltration (ft^3) $V_{retention}$ *= (Item 7 *Item 8) + (Item 9 * Item 10 * Item 11)*			
13 Runoff volume retention from on-lot infiltration (ft^3):	$V_{retention}$ *=Sum of Item 12 for all BMPs*		

Form 4.3-2 cont. Site Design Hydrologic Source Control BMPs (DA 1)

14 Implementation of evapotranspiration BMP (green, brown, or blue roofs): Yes ☐ No ☒ *If yes, complete Items 15-20. If no, proceed to Item 21*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
15 Rooftop area planned for ET BMP (ft^2)			
16 Average wet season ET demand (in/day) *Use local values, typical ~ 0.1*			
17 Daily ET demand (ft^3/day) *Item 15 * (Item 16 / 12)*			
18 Drawdown time (hrs) *Copy Item 6 in Form 4.2-1*			
19 Retention Volume (ft^3) *$V_{retention}$ = Item 17 * (Item 18 / 24)*			
20 Runoff volume retention from evapotranspiration BMPs (ft^3): *$V_{retention}$ =Sum of Item 19 for all BMPs*			
21 Implementation of Street Trees: Yes ☐ No ☒ *If yes, complete Items 22-25. If no, proceed to Item 26*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
22 Number of Street Trees			
23 Average canopy cover over impervious area (ft^2)			
24 Runoff volume retention from street trees (ft^3) *$V_{retention}$ = Item 22 * Item 23 * (0.05/12) assume runoff retention of 0.05 inches*			
25 Runoff volume retention from street tree BMPs (ft^3): *$V_{retention}$ = Sum of Item 24 for all BMPs*			
26 Implementation of residential rain barrel/cisterns: Yes ☐ No ☒ *If yes, complete Items 27-29; If no, proceed to Item 30*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
27 Number of rain barrels/cisterns			
28 Runoff volume retention from rain barrels/cisterns (ft^3) *$V_{retention}$ = Item 27 * 3*			
29 Runoff volume retention from residential rain barrels/Cisterns (ft3): *$V_{retention}$ =Sum of Item 28 for all BMPs*			
30 Total Retention Volume from Site Design Hydrologic Source Control BMPs: *Sum of Items 5, 13, 20, 25 and 29*			

4.3.2 Infiltration BMPs

Use Form 4.3-3 to compute on-site retention of runoff from proposed retention and infiltration BMPs. Volume retention estimates are sensitive to the percolation rate used, which determines the amount of runoff that can be infiltrated within the specified drawdown time. The infiltration safety factor reduces field measured percolation to account for potential inaccuracy associated with field measurements, declining BMP performance over time, and compaction during construction. Appendix D of the TGD for WQMP provides guidance on estimating an appropriate safety factor to use in Form 4.3-3.

If site constraints limit the use of BMPs to a single type and implementation of retention and infiltration BMPs mitigate no more than 40% of the DCV, then they are considered infeasible and the Project Proponent may evaluate the effectiveness of BMPs lower in the LID hierarchy of use (Section 5.5.1 of the TGD for WQMP)

If implementation of infiltrations BMPs is feasible as determined using Form 4.3-1, then LID infiltration BMPs shall be implemented to the MEP (section 4.1 of the TGD for WQMP).

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Form 4.3-3 Infiltration LID BMP - including underground BMPs (DA 1)

1 Remaining LID DCV not met by site design HSC BMP (ft^3 **39,326** *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item 30*			
BMP Type *Use columns to the right to compute runoff volume retention from proposed infiltration BMP (select BMP from Table 5-4 in TGD for WQMP) - Use additional forms for more BMPs*	DA 1 DMA A BMP Type CMP Underground Infiltration System		
2 Infiltration rate of underlying soils (in/hr) *See Section 5.4.2 and Appendix D of the TGD for WQMP for minimum requirements for assessment methods*	3.4		
3 Infiltration safety factor *See TGD Section 5.4.2 and Appendix D*	2		
4 Design percolation rate (in/hr) *P_{design} = Item 2 / Item 3*	1.7		
5 Ponded water drawdown time (hr) *Copy Item 6 in Form 4.2-1*	48		
6 Maximum ponding depth (ft) *BMP specific, see Table 5-4 of the TGD for WQMP for BMP design details*	N/A		
7 Ponding Depth (ft) *d_{BMP} = Minimum of (1/12*Item 4*Item 5) or Item 6*	N/A		
8 Infiltrating surface area, SA_{BMP} (ft^2) *the lesser of the area needed for infiltration of full DCV or minimum space requirements from Table 5.7 of the TGD for WQMP*	N/A		
9 Amended soil depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 in the TGD for WQMP for reference to BMP design details*	N/A		
10 Amended soil porosity	N/A		
11 Gravel depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 of the TGD for WQMP for BMP design details*	N/A		
12 Gravel porosity	N/A		
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*	N/A		
14 Above Ground Retention Volume (ft^3) *$V_{retention}$ = Item 8 * [Item7 + (Item 9 * Item 10) + (Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*	0		
15 Underground Retention Volume (ft^3) *Volume determined using manufacturer's specifications and calculations*	45,098		
16 Total Retention Volume from LID Infiltration BMPs: **45,098** *(Sum of Items 14 and 15 for all infiltration BMP included in plan)*			
17 Fraction of DCV achieved with infiltration BMP: 100% *Retention% = Item 16 / Form 4.2-1 Item 7*			
18 Is full LID DCV retained on-site with combination of hydrologic source control and LID retention and infiltration BMPs? Yes ☒ No ☐ *If yes, demonstrate conformance using Form 4.3-10; If no, then reduce Item 3, Factor of Safety to 2.0 and increase Item 8, Infiltrating Surface Area, such that the portion of the site area used for retention and infiltration BMPs equals or exceeds the minimum effective area thresholds (Table 5-7 of the TGD for WQMP) for the applicable category of development and repeat all above calculations.*			

4.3.3 Harvest and Use BMP

Harvest and use BMP may be considered if the full LID DCV cannot be met by maximizing infiltration BMPs. Use Form 4.3-4 to compute on-site retention of runoff from proposed harvest and use BMPs.

Volume retention estimates for harvest and use BMPs are sensitive to the on-site demand for captured stormwater. Since irrigation water demand is low in the wet season, when most rainfall events occur in San Bernardino County, the volume of water that can be used within a specified drawdown period is relatively low. The bottom portion of Form 4.3-4 facilitates the necessary computations to show infeasibility if a minimum incremental benefit of 40 percent of the LID DCV would not be achievable with MEP implementation of on-site harvest and use of stormwater (Section 5.5.4 of the TGD for WQMP).

Form 4.3-4 Harvest and Use BMPs (DA 1)

1 Remaining LID DCV not met by site design HSC or infiltration BMP (ft^3): N/A *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item 30 – Form 4.3-3 Item 16*			
BMP Type(s) *Compute runoff volume retention from proposed harvest and use BMP (Select BMPs from Table 5-4 of the TGD for WQMP) - Use additional forms for more BMPs*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Describe cistern or runoff detention facility			
3 Storage volume for proposed detention type (ft^3) *Volume of cistern*			
4 Landscaped area planned for use of harvested stormwater (ft^2)			
5 Average wet season daily irrigation demand (in/day) Use local values, typical ~ 0.1 in/day			
6 Daily water demand (ft^3/day) *Item 4 * (Item 5 / 12)*			
7 Drawdown time (hrs) *Copy Item 6 from Form 4.2-1*			
8 Retention Volume (ft^3) *$V_{retention}$ = Minimum of (Item 3) or (Item 6 * (Item 7 / 24))*			
9 Total Retention Volume (ft^3) from Harvest and Use BMP *Sum of Item 8 for all harvest and use BMP included in plan*			
10 Is the full DCV retained with a combination of LID HSC, retention and infiltration, and harvest and use BMPs? Yes ☐ No ☐ *If yes, demonstrate conformance using Form 4.3-10. If no, then re-evaluate combinations of all LID BMP and optimize their implementation such that the maximum portion of the DCV is retained on-site (using a single BMP type or combination of BMP types). If the full DCV cannot be mitigated after this optimization process, proceed to Section 4.3.4.*			

4.3.4 Biotreatment BMP

Biotreatment BMPs may be considered if the full LID DCV cannot be met by maximizing retention and infiltration, and harvest and use BMPs. A key consideration when using biotreatment BMP is the effectiveness of the proposed BMP in addressing the pollutants of concern for the project (see Table 5-5 of the TGD for WQMP).

Use Form 4.3-5 to summarize the potential for volume based and/or flow based biotreatment options to biotreat the remaining unmet LID DCV w. Biotreatment computations are included as follows:

- Use Form 4.3-6 to compute biotreatment in small volume based biotreatment BMP (e.g. bioretention w/underdrains);
- Use Form 4.3-7 to compute biotreatment in large volume based biotreatment BMP (e.g. constructed wetlands);
- Use Form 4.3-8 to compute sizing criteria for flow-based biotreatment BMP (e.g. bioswales)

Form 4.3-5 Selection and Evaluation of Biotreatment BMP (DA 1)

1 Remaining LID DCV not met by site design HSC, infiltration, or harvest and use BMP for potential biotreatment (ft^3): 0 *Form 4.2-1 Item 7 - Form 4.3-2 Item 30 – Form 4.3-3 Item 16- Form 4.3-4 Item 9*	List pollutants of concern *Copy from Form 2.3-1.*	
2 Biotreatment BMP Selected *(Select biotreatment BMP(s) necessary to ensure all pollutants of concern are addressed through Unit Operations and Processes, described in Table 5-5 of the TGD for WQMP)*	Volume-based biotreatment *Use Forms 4.3-6 and 4.3-7 to compute treated volume*	Flow-based biotreatment *Use Form 4.3-8 to compute treated volume*
	☐ Bioretention with underdrain ☐ Planter box with underdrain ☐ Constructed wetlands ☐ Wet extended detention ☐ Dry extended detention	☐ Vegetated swale ☐ Vegetated filter strip ☐ Proprietary biotreatment
3 Volume biotreated in volume based biotreatment BMP (ft^3): *Form 4.3-6 Item 15 + Form 4.3-7 Item 13*	**4** Compute remaining LID DCV with implementation of volume based biotreatment BMP (ft^3): *Item 1 – Item 3*	**5** Remaining fraction of LID DCV for sizing flow based biotreatment BMP: % *Item 4 / Item 1*
6 Flow-based biotreatment BMP capacity provided (cfs): *Use Figure 5-2 of the TGD for WQMP to determine flow capacity required to provide biotreatment of remaining percentage of unmet LID DCV (Item 5), for the project's precipitation zone (Form 3-1 Item 1)*		
7 Metrics for MEP determination: • Provided a WQMP with the portion of site area used for suite of LID BMP equal to minimum thresholds in Table 5-7 of the TGD for WQMP for the proposed category of development: ☐ *If maximized on-site retention BMPs is feasible for partial capture, then LID BMP implementation must be optimized to retain and infiltrate the maximum portion of the DCV possible within the prescribed minimum effective area. The remaining portion of the DCV shall then be mitigated using biotreatment BMP.*		

Form 4.3-6 Volume Based Biotreatment (DA 1) – Bioretention and Planter Boxes with Underdrains

Biotreatment BMP Type *(Bioretention w/underdrain, planter box w/underdrain, other comparable BMP)*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
1 Pollutants addressed with BMP *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in Table 5-5 of the TGD for WQMP*			
2 Amended soil infiltration rate *Typical ~ 5.0*			
3 Amended soil infiltration safety factor *Typical ~ 2.0*			
4 Amended soil design percolation rate (in/hr) P_{design} *= Item 2 / Item 3*			
5 Ponded water drawdown time (hr) *Copy Item 6 from Form 4.2-1*			
6 Maximum ponding depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
7 Ponding Depth (ft) d_{BMP} *= Minimum of (1/12 * Item 4 * Item 5) or Item 6*			
8 Amended soil surface area (ft^2)			
9 Amended soil depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
10 Amended soil porosity, *n*			
11 Gravel depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
12 Gravel porosity, *n*			
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*			
14 Biotreated Volume (ft^3) $V_{biotreated}$ *= Item 8 * [(Item 7/2) + (Item 9 * Item 10) +(Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*			
15 Total biotreated volume from bioretention and/or planter box with underdrains BMP: *Sum of Item 14 for all volume-based BMPs included in this form*			

Form 4.3-7 Volume Based Biotreatment (DA 1) – Constructed Wetlands and Extended Detention

Biotreatment BMP Type *Constructed wetlands, extended wet detention, extended dry detention, or other comparable proprietary BMP. If BMP includes multiple modules (e.g. forebay and main basin), provide separate estimates for storage and pollutants treated in each module.*	DA DMA BMP Type		DA DMA BMP Type *(Use additional forms for more BMPs)*	
	Forebay	Basin	Forebay	Basin
1 Pollutants addressed with BMP forebay and basin *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in Table 5-5 of the TGD for WQMP*				
2 Bottom width (ft)				
3 Bottom length (ft)				
4 Bottom area (ft^2) A_{bottom} = *Item 2 * Item 3*				
5 Side slope (ft/ft)				
6 Depth of storage (ft)				
7 Water surface area (ft^2) $A_{surface}$ =*(Item 2 + (2 * Item 5 * Item 6)) * (Item 3 + (2 * Item 5 * Item 6))*				
8 Storage volume (ft^3) *For BMP with a forebay, ensure fraction of total storage is within ranges specified in BMP specific fact sheets, see Table 5-6 of the TGD for WQMP for reference to BMP design details* V =*Item 6 / 3 * [Item 4 + Item 7 + (Item 4 * Item 7)^0.5]*				
9 Drawdown Time (hrs) *Copy Item 6 from Form 2.1*				
10 Outflow rate (cfs) Q_{BMP} = *(Item* $8_{forebay}$ *+ Item* 8_{basin}*) / (Item 9 * 3600)*				
11 Duration of design storm event (hrs)				
12 Biotreated Volume (ft^3) $V_{biotreated}$ = *(Item* $8_{forebay}$ *+ Item* 8_{basin}*) +(Item 10 * Item 11 * 3600)*				
13 Total biotreated volume from constructed wetlands, extended dry detention, or extended wet detention : *(Sum of Item 12 for all BMP included in plan)*				

Form 4.3-8 Flow Based Biotreatment (DA 1)

Biotreatment BMP Type *Vegetated swale, vegetated filter strip, or other comparable proprietary BMP*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
1 Pollutants addressed with BMP *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in TGD Table 5-5*			
2 Flow depth for water quality treatment (ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
3 Bed slope (ft/ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
4 Manning's roughness coefficient			
5 Bottom width (ft) *b_w = (Form 4.3-5 Item 6 * Item 4) / (1.49 * Item 2^1.67 * Item 3^0.5)*			
6 Side Slope (ft/ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
7 Cross sectional area (ft^2) *A = (Item 5 * Item 2) + (Item 6 * Item 2^2)*			
8 Water quality flow velocity (ft/sec) *V = Form 4.3-5 Item 6 / Item 7*			
9 Hydraulic residence time (min) *Pollutant specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
10 Length of flow based BMP (ft) *L = Item 8 * Item 9 * 60*			
11 Water surface area at water quality flow depth (ft^2) *SA_{top} = (Item 5 + (2 * Item 2 * Item 6)) * Item 10*			

4.3.5 Conformance Summary

Complete Form 4.3-9 to demonstrate how on-site LID DCV is met with proposed site design hydrologic source control, infiltration, harvest and use, and/or biotreatment BMP. The bottom line of the form is used to describe the basis for infeasibility determination for on-site LID BMP to achieve full LID DCV, and provides methods for computing remaining volume to be addressed in an alternative compliance plan. If the project has more than one outlet, then complete additional versions of this form for each outlet.

Form 4.3-9 Conformance Summary and Alternative Compliance Volume Estimate (DA 1)

1 Total LID DCV for the Project DA-1 (ft^3):39,326 *Copy Item 7 in Form 4.2-1*

2 On-site retention with site design hydrologic source control LID BMP (ft^3): *Copy Item 30 in Form 4.3-2*

3 On-site retention with LID infiltration BMP (ft^3): **197,240** *Copy Item 16 in Form 4.3-3*

4 On-site retention with LID harvest and use BMP (ft^3): 0 *Copy Item 9 in Form 4.3-4*

5 On-site biotreatment with volume based biotreatment BMP (ft^3): 0 *Copy Item 3 in Form 4.3-5*

6 Flow capacity provided by flow based biotreatment BMP (cfs): 0 *Copy Item 6 in Form 4.3-5*

7 LID BMP performance criteria are achieved if answer to any of the following is "Yes":

- Full retention of LID DCV with site design HSC, infiltration, or harvest and use BMP: Yes ☒ No ☐
  If yes, sum of Items 2, 3, and 4 is greater than Item 1
- Combination of on-site retention BMPs for a portion of the LID DCV and volume-based biotreatment BMP that address all pollutants of concern for the remaining LID DCV: Yes ☐ No ☒
  If yes, a) sum of Items 2, 3, 4, and 5 is greater than Item 1, and Items 2, 3 and 4 are maximized; or b) Item 6 is greater than Form 4.3--5 Item 6 and Items 2, 3 and 4 are maximized
- On-site retention and infiltration is determined to be infeasible and biotreatment BMP provide biotreatment for all pollutants of concern for full LID DCV: Yes ☐ No ☒
  If yes, Form 4.3-1 Items 7 and 8 were both checked yes

8 If the LID DCV is not achieved by any of these means, then the project may be allowed to develop an alternative compliance plan. Check box that describes the scenario which caused the need for alternative compliance:

- Combination of HSC, retention and infiltration, harvest and use, and biotreatment BMPs provide less than full LID DCV capture: ☐
  Checked yes for Form 4.3-5 Item 7, Item 6 is zero, and sum of Items 2, 3, 4, and 5 is less than Item 1. If so, apply water quality credits and calculate volume for alternative compliance, V_{alt} *= (Item 1 – Item 2 – Item 3 – Item 4 – Item 5) * (100 - Form 2.4-1 Item 2)%*
- An approved Watershed Action Plan (WAP) demonstrates that water quality and hydrologic impacts of urbanization are more effective when managed in at an off-site facility: ☐
  Attach appropriate WAP section, including technical documentation, showing effectiveness comparisons for the project site and regional watershed

4.3.6 Hydromodification Control BMP

Use Form 4.3-10 to compute the remaining runoff volume retention, after LID BMP are implemented, needed to address HCOC, and the increase in time of concentration and decrease in peak runoff necessary to meet targets for protection of waterbodies with a potential HCOC. Describe hydromodification control BMP that address HCOC, which may include off-site BMP and/or in-stream controls. Section 5.6 of the TGD for WQMP provides additional details on selection and evaluation of hydromodification control BMP.

Form 4.3-10 Hydromodification Control BMPs (DA 1)

1 Volume reduction needed for HCOC performance criteria (ft^3): *(Form 4.2-2 Item 4 * 0.95) – Form 4.2-2 Item 1*	**2** On-site retention with site design hydrologic source control, infiltration, and harvest and use LID BMP (ft^3): *Sum of Form 4.3-9 Items 2, 3, and 4 Evaluate option to increase implementation of on-site retention in Forms 4.3-2, 4.3-3, and 4.3-4 in excess of LID DCV toward achieving HCOC volume reduction*
3 Remaining volume for HCOC volume capture (ft^3): *Item 1 – Item 2*	**4** Volume capture provided by incorporating additional on-site or off-site retention BMPs (ft^3): *Existing downstream BMP may be used to demonstrate additional volume capture (if so, attach to this WQMP a hydrologic analysis showing how the additional volume would be retained during a 2-yr storm event for the regional watershed)*

5 If Item 4 is less than Item 3, incorporate in-stream controls on downstream waterbody segment to prevent impacts due to hydromodification ☐ *Attach in-stream control BMP selection and evaluation to this WQMP*

6 Is Form 4.2-2 Item 11 less than or equal to 5%: Yes ☐ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate increase in time of concentration achieved by proposed LID site design, LID BMP, and additional on-site or off-site retention BMP ☐
  BMP upstream of a waterbody segment with a potential HCOC may be used to demonstrate increased time of concentration through hydrograph attenuation (if so, show that the hydraulic residence time provided in BMP for a 2-year storm event is equal or greater than the addition time of concentration requirement in Form 4.2-4 Item 15)
- Increase time of concentration by preserving pre-developed flow path and/or increase travel time by reducing slope and increasing cross-sectional area and roughness for proposed on-site conveyance facilities ☐
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

7 Form 4.2-2 Item 12 less than or equal to 5%: Yes ☐ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate reduction in peak runoff achieved by proposed LID site design, LID BMPs, and additional on-site or off-site retention BMPs ☐
  BMPs upstream of a waterbody segment with a potential HCOC may be used to demonstrate additional peak runoff reduction through hydrograph attenuation (if so, attach to this WQMP, a hydrograph analysis showing how the peak runoff would be reduced during a 2-yr storm event)
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

4.4 Alternative Compliance Plan (if applicable)

Describe an alternative compliance plan (if applicable) for projects not fully able to infiltrate, harvest and use, or biotreat the DCV via on-site LID practices. A project proponent must develop an alternative compliance plan to address the remainder of the LID DCV. Depending on project type some projects may qualify for water quality credits that can be applied to reduce the DCV that must be treated prior to development of an alternative compliance plan (see Form 2.4-1, Water Quality Credits). Form 4.3-9 Item 8 includes instructions on how to apply water quality credits when computing the DCV that must be met through alternative compliance. Alternative compliance plans may include one or more of the following elements:

- On-site structural treatment control BMP - All treatment control BMP should be located as close to possible to the pollutant sources and should not be located within receiving waters;
- Off-site structural treatment control BMP - Pollutant removal should occur prior to discharge of runoff to receiving waters;
- Urban runoff fund or In-lieu program, if available

Depending upon the proposed alternative compliance plan, approval by the executive officer may or may not be required (see Section 6 of the TGD for WQMP).

Section 5 Inspection and Maintenance Responsibility for Post Construction BMP

All BMP included as part of the project WQMP are required to be maintained through regular scheduled inspection and maintenance (refer to Section 8, Post Construction BMP Requirements, in the TGD for WQMP). Fully complete Form 5-1 summarizing all BMP included in the WQMP. Attach additional forms as needed. The WQMP shall also include a detailed Operation and Maintenance Plan for all BMP and may require a Maintenance Agreement (consult the jurisdiction's LIP). If a Maintenance Agreement is required, it must also be attached to the WQMP.

Form 5-1 BMP Inspection and Maintenance (use additional forms as necessary)

BMP	Reponsible Party(s)	Inspection/ Maintenance Activities Required	Minimum Frequency of Activities
N14 Catch Basin/ filter insert Inspection	By owner & future owner	Inspect for illegal dumping and /or debris accumulation. Clean filters whenever 25% of filter capacity is exceeded by debris accumulation	Inspect minimum 2 times per year and after every major storm event
N4 Undergroun d CMP Detention/I nfiltration Systerm	By owner & future owner	Inspect the underground CMP via the access manhole, for accumulated sediment and debris levels and cleanout solids when > 6" build up occurs. Inspect for standing water within 48 hours of heavy rain events to ensure proper drawdown. Clean and flush underground systems to restore free drainage.	Annually, and after heavy rains
N3 Landscape Areas	By owner & future owner	Implement - Mowing, Trimming, Pruning practices to prevent discharges of landscape waste into on-site retention structures. Control fertilizer, herbicide & pesticide applications to prevent stormwater contamination	Weekly
S1 Signage & Stencil	By owner & future owner	Clean the stencil/signage surface to remove any excess dirt. Re-paint if necessary.	Annully
N11 Trash Cans	By owner & future owner	Empty trash receptacles. Clean the areas around Cans by sweeping .	Weekly

N1 Education of Property Tenants	By Owner	The Property Owner/Tenant should familiarize him/herself with this WQMP Document.	Once
N2 Activity Restrictions	By Owner	Control Discharge of storm drain water pollutants from the Site by restricting activity and training employees	Monthly
N13 House Keeping of loading docs	By Owner	Keep the loading docks free of any clutter	Weekly
N15 Parking Lot Sweeping	By Owner	Parking lots and dive aisles shall be vacuumed and swept. Debris collected to be despised off-site or in the on-site dumpster	Monthly
S4 Efficient Irrigation	By Owner	Irrigation to be consistent with State Water Model Efficient Landscape Ordinances and City of Fontana Landscape Development Standards	-
N12 Employee Training	By Owner	The Owner should ensure that the employees are trained and familiar with BMPs.	Once
S5 Finished Grade of Landscape areas to be 1-2" below top of curb	By Owner	Depress landscape areas to promote retention of water and infiltration.	Annually

Section 6 WQMP Attachments

6.1. Site Plan and Drainage Plan

Include a site plan and drainage plan sheet set containing the following minimum information:

- Project location
- Site boundary
- Land uses and land covers, as applicable
- Suitability/feasibility constraints
- Structural Source Control BMP locations
- Site Design Hydrologic Source Control BMP locations
- LID BMP details
- Drainage delineations and flow information
- Drainage connections

6.2 Electronic Data Submittal

Minimum requirements include submittal of PDF exhibits in addition to hard copies. Format must not require specialized software to open. If the local jurisdiction requires specialized electronic document formats (as described in their local Local Implementation Plan), this section will describe the contents (e.g., layering, nomenclature, geo-referencing, etc.) of these documents so that they may be interpreted efficiently and accurately.

6.3 Post Construction

Attach all O&M Plans and Maintenance Agreements for BMP to the WQMP.

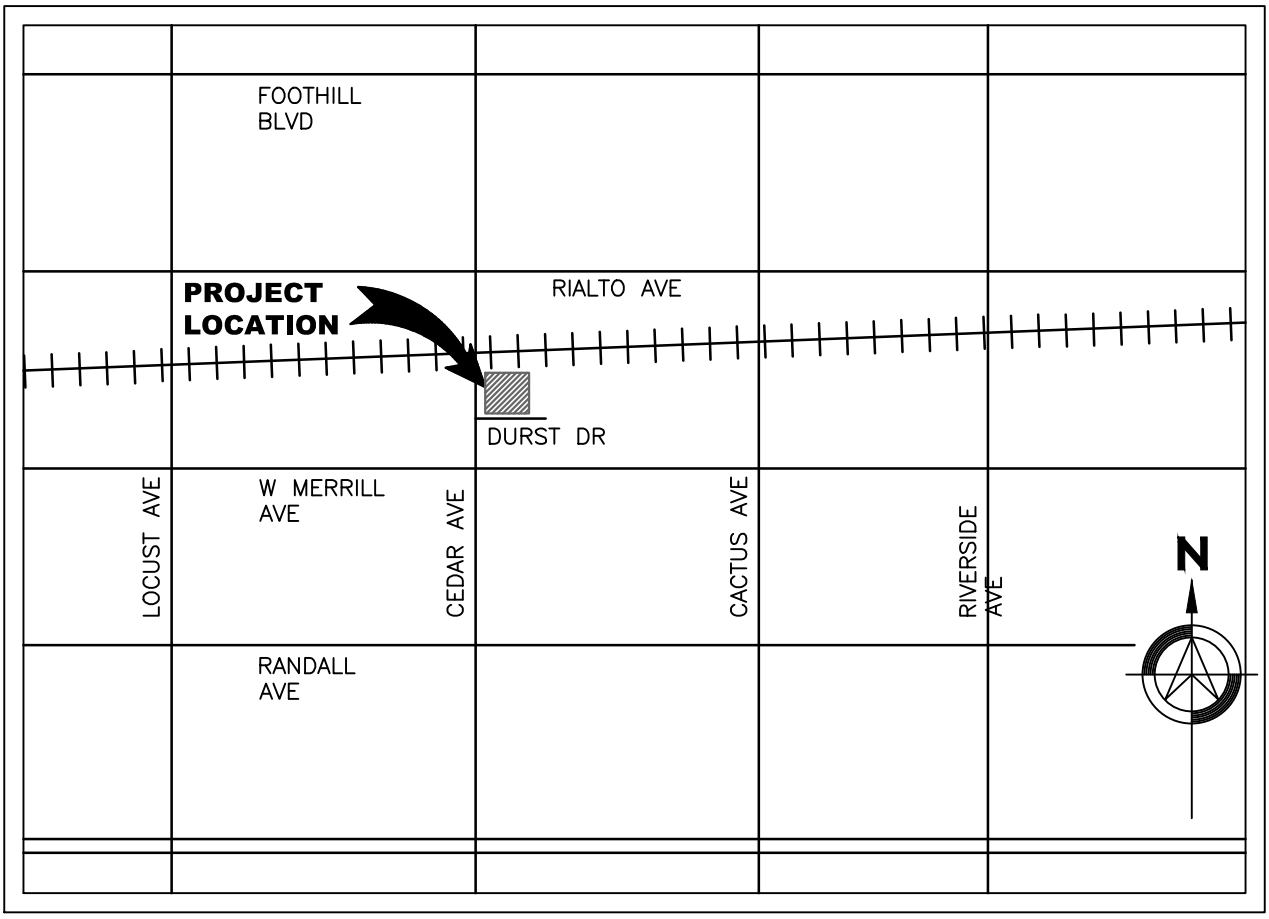
6.4 Other Supporting Documentation

- BMP Educational Materials
- Activity Restriction – C, C&R's & Lease Agreements

Section 6.1

Attachment A

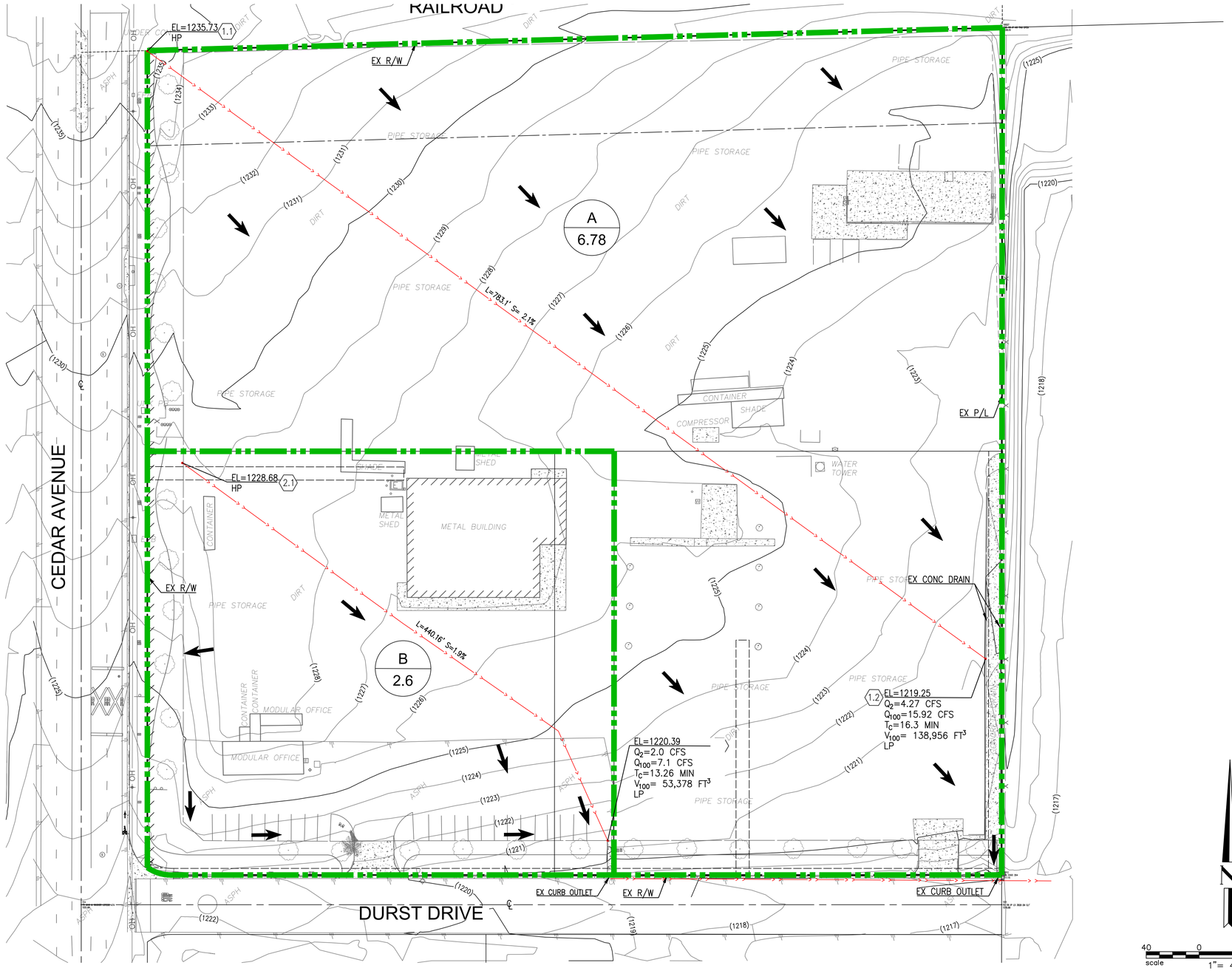
- Vicinity Map
- Existing Site Map
- Existing Condition Site Photos

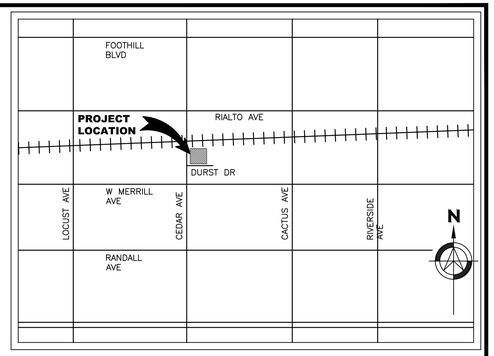


VICINITY MAP

N.T.S.

CITY OF RIALTO
HYDROLOGY EXHIBIT
CEDAR AVENUE AND DURST DRIVE
PRE-DEVELOPED CONDITION





VICINITY MAP
N.T.S.

LEGEND:

- DRAINAGE AREA BOUNDARY
- LONGEST WATERCOURSE
- PROPOSED FLOW DIRECTION ARROW
- A / X-XXX — DRAINAGE SUB AREA DESIGNATION / AREA (AC)
- # — NODE #
- HP, LP — HIGH POINT, LOW POINT
- X% — LONGEST DRAINAGE WATERCOURSE SLOPE
- X' — LONGEST DRAINAGE WATERCOURSE

HYDROLOGY INFORMATION

SITE AREA:	9.38 ACRE	
SOIL GROUP:	A	(PER SBC SOIL GROUP MAP FIG. C-15)
IMPERVIOUS:	13% (PER CALCULATIONS)	
ISOHYETALS	1.46"	(100-YEAR 1 HOUR)
	0.586"	(2-YEAR 1 HOUR)
CN NUMBER:	78	(SOIL GROUP A)
FREQUENCY:	100 YEAR	(FOR STORM DARIN DESIGN)
	2 YEAR	(FOR STORMWATER QUALITY)
METHOD:	SAN BERNARDINO COUNTY HYDROLOGY MANUAL	

PREPARED BY:
WestLAND Group, Inc. Land Surveyors • Civil Engineers • GIS
4150 CONCOURS, ONTARIO, CA 91764
PHONE: (909) 989-9789 FAX: (909) 989-9660
JOB NO: 2018-131

CEDAR AVENUE AND DURST DRIVE
PRE-DEVELOPED EXHIBIT

CITY OF RIALTO

DATE: JUN 2021
SHEET 1 OF 2

Drawing Name: P:\Year_2021\2021-100 1230 W Durst Rialto - Blackcreek\06 Engineering\LD\Reports\WQMP\3_Exhibits\2021-100_PRE - Prelim.dwg Last Opened: Jun 11, 2021 - 7:33am by rthome.sawrls


1230 Durst Drive
Rialto Durst





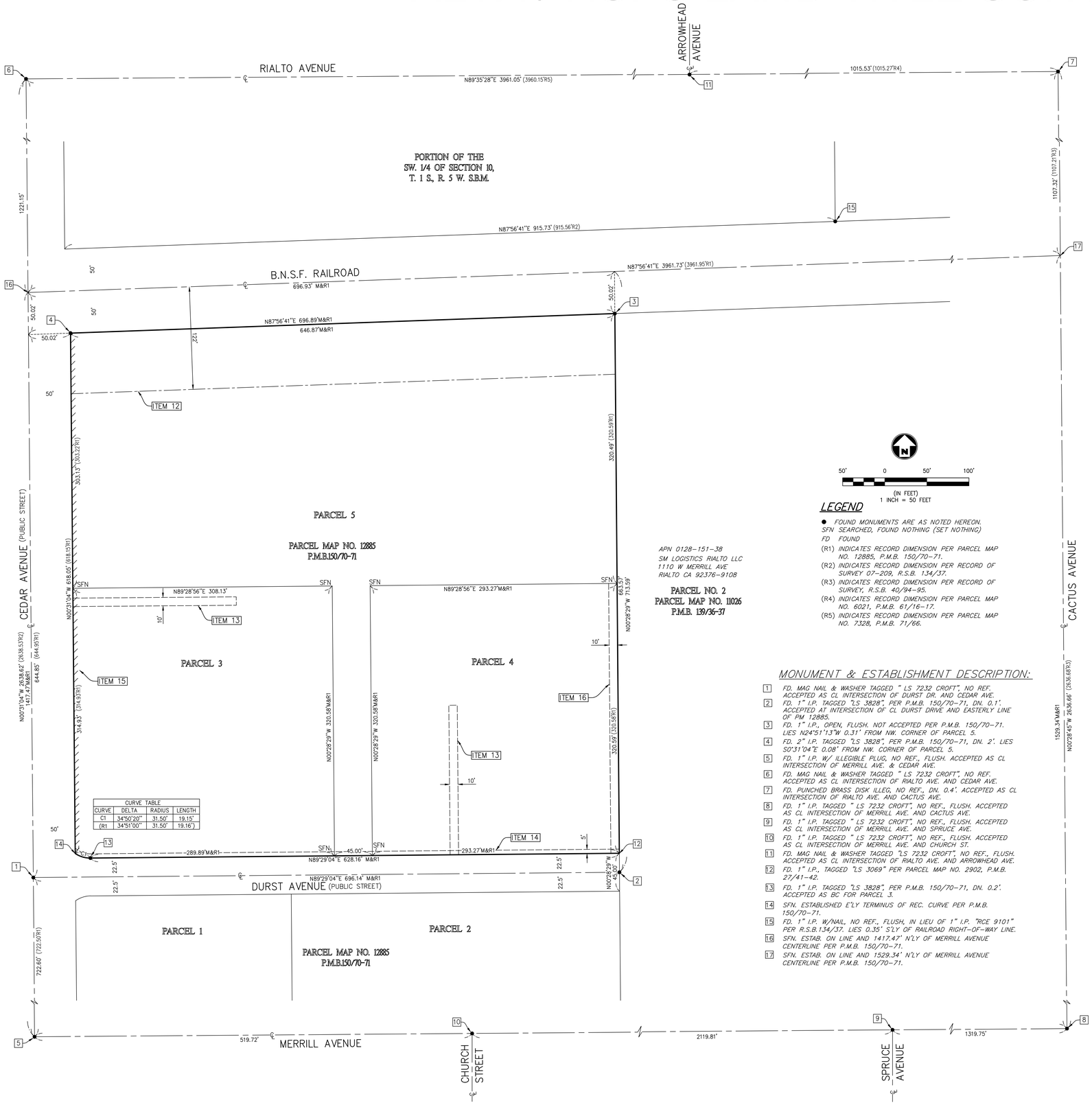


Section 6.1

Attachment B

- Project Site Boundary Map
- Existing Condition Site Drainage Exhibit
- Post-Development Condition Drainage / LID /BMPs Exhibit

ALTA / NSPS LAND TITLE SURVEY



LEGEND

- ● FOUND MONUMENTS ARE AS NOTED HEREON.
- SFN SEARCHED, FOUND NOTHING (SET NOTHING)
- FD FOUND
- (R1) INDICATES RECORD DIMENSION PER PARCEL MAP NO. 12885, P.M.B. 150/70-71.
- (R2) INDICATES RECORD DIMENSION PER RECORD OF SURVEY 07-209, R.S.B. 134/37.
- (R3) INDICATES RECORD DIMENSION PER RECORD OF SURVEY, R.S.B. 40/94-95.
- (R4) INDICATES RECORD DIMENSION PER PARCEL MAP NO. 6021, P.M.B. 61/16-17.
- (R5) INDICATES RECORD DIMENSION PER PARCEL MAP NO. 7328, P.M.B. 71/66.

MONUMENT & ESTABLISHMENT DESCRIPTION:

1. FD. MAG NAIL & WASHER TAGGED " LS 7232 CROFT", NO REF. ACCEPTED AS CL INTERSECTION OF DURST DR. AND CEDAR AVE.
2. FD. 1" I.P. TAGGED "LS 3828", PER P.M.B. 150/70-71, DN. 0.1'. ACCEPTED AT INTERSECTION OF CL DURST DRIVE AND EASTERLY LINE OF PM 12885.
3. FD. 1" I.P., OPEN, FLUSH. NOT ACCEPTED PER P.M.B. 150/70-71. LIES N24°51'13"W 0.31' FROM NW. CORNER OF PARCEL 5.
4. FD. 2" I.P. TAGGED "LS 3828", PER P.M.B. 150/70-71, DN. 2'. LIES S0°31'04"E 0.08' FROM NW. CORNER OF PARCEL 5.
5. FD. 1" I.P. W/ ILLEGIBLE PLUG, NO REF., FLUSH. ACCEPTED AS CL INTERSECTION OF MERRILL AVE. & CEDAR AVE.
6. FD. MAG NAIL & WASHER TAGGED " LS 7232 CROFT", NO REF. ACCEPTED AS CL INTERSECTION OF RIALTO AVE. AND CEDAR AVE.
7. FD. PUNCHED BRASS DISK ILLEG, NO REF., DN. 0.4'. ACCEPTED AS CL INTERSECTION OF RIALTO AVE. AND CACTUS AVE.
8. FD. 1" I.P. TAGGED " LS 7232 CROFT", NO REF., FLUSH. ACCEPTED AS CL INTERSECTION OF MERRILL AVE. AND CACTUS AVE.
9. FD. 1" I.P. TAGGED " LS 7232 CROFT", NO REF., FLUSH. ACCEPTED AS CL INTERSECTION OF MERRILL AVE. AND SPRUCE AVE.
10. FD. 1" I.P. TAGGED " LS 7232 CROFT", NO REF., FLUSH. ACCEPTED AS CL INTERSECTION OF MERRILL AVE. AND CHURCH ST.
11. FD. MAG NAIL & WASHER TAGGED "LS 7232 CROFT", NO REF., FLUSH. ACCEPTED AS CL INTERSECTION OF RIALTO AVE. AND ARROWHEAD AVE.
12. FD. 1" I.P., TAGGED "LS 3069" PER PARCEL MAP NO. 2902, P.M.B. 27/41-42.
13. FD. 1" I.P. TAGGED "LS 3828", PER P.M.B. 150/70-71, DN. 0.2'. ACCEPTED AS BC FOR PARCEL 3.
14. SFN. ESTABLISHED E'LY TERMINUS OF REC. CURVE PER P.M.B. 150/70-71.
15. FD. 1" I.P. W/NAIL, NO REF., FLUSH, IN LIEU OF 1" I.P. "RCE 9101" PER R.S.B.134/37. LIES 0.35' S'LY OF RAILROAD RIGHT-OF-WAY LINE.
16. SFN. ESTAB. ON LINE AND 1417.47' N'LY OF MERRILL AVENUE CENTERLINE PER P.M.B. 150/70-71.
17. SFN. ESTAB. ON LINE AND 1529.34' N'LY OF MERRILL AVENUE CENTERLINE PER P.M.B. 150/70-71.

OWNERSHIP:

THE TITLE IS, AT THE COMMITMENT DATE, VESTED IN:
1230 DURST, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY

THE FOLLOWING INFORMATION HAS BEEN DERIVED FROM THE TITLE COMMITMENT FILE NO: NCS-1046378-LA2, PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY. COMMITMENT DATE: DECEMBER 29, 2020 AT 7:30 AM.

LEGAL DESCRIPTION:

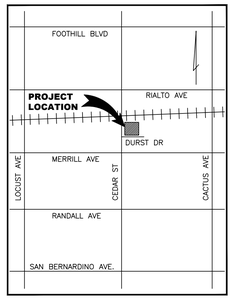
THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF RIALTO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCELS 3, 4 AND 5 OF PARCEL MAP NO. 12885, IN THE CITY OF RIALTO, COUNTY OF SAN BERNARDINO AS PER MAP RECORDED IN BOOK 150 PAGE(S) 70 & 71 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

FOR CONVEYANCING PURPOSES ONLY: APN 0128-062-25-0-000 (AFFECTS PARCEL 3)
APN: 0128-062-26-0-000 (AFFECTS PARCEL 4)
APN: 0128-062-27-0-000 (AFFECTS PARCEL 5)

TITLE REPORT EXCEPTIONS:

- [ ] INDICATES ITEM PLOTTED HEREON.
- 1-11 TITLE ISSUES AND TAX MATTERS.
- 12 AN EASEMENT RESERVATION IN FAVOR OF LUCY TUDOR, MARTIN TUDOR & ANDREW TUDOR FOR MAINTAINING EXISTING PIPLESE AND OPERATION OF PIPELINE PURPOSES, RECORDED AUGUST 29, 1957 AS BOOK 4312, PAGE 585 OF OFFICIAL RECORDS. *PLOTTED*
- 13 AN EASEMENT IN FAVOR OF SOUTHERN CALIFORNIA EDISON COMPANY FOR RIGHT TO CONSTRUCT, USE AND MAINTAIN ELECTRICAL AND COMMUNICATION SYSTEMS RECORDED APRIL 13, 1981 AS INSTRUMENT NO. 81-79806 OF OFFICIAL RECORDS *PLOTTED*
- 14 AN EASEMENT IN FAVOR OF THE CITY OF RIALTO FOR PUBLIC UTILITY AND INCIDENTAL PURPOSES SHOWN OR DEDICATED ON THE MAP OF PARCEL MAP NO. 12885 RECORDED JULY 11, 1990 AND ON FILE IN BOOK 150, PAGE 70-71, OF PARCEL MAPS. *PLOTTED*
- 15 ABUTTER'S RIGHTS OF INGRESS AND EGRESS TO OR FROM CEDAR AVENUE, HAVE BEEN DEDICATED OR RELINQUISHED ON THE MAP OF PARCEL MAP NO. 12885 ON FILE IN BOOK 150, PAGE 70-71, OF PARCEL MAPS. *PLOTTED*
- 16 AN EASEMENT IN FAVOR OF LINDA A. DOUGLASS FOR FOR DRAINAGE AND FLOWAGE AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED MAY 11, 2001 AS INSTRUMENT NO. 01-184703 OF OFFICIAL RECORDS.
  DOCUMENT RE-RECORDED JULY 09, 2001 AS INSTRUMENT NO. 01-266628 OF OFFICIAL RECORDS. *PLOTTED*
- 17 AN OPEN CONCRETE STORM DRAIN LOCATED ALONG THE EASTERLY BOUNDARY LINE OF THE LAND, AS DISCLOSED BY AN INSPECTION, AS DISCLOSED BY AN PRIOR TITLE EVIDENCE. *SEE SHEET 2 FOR LOCATION*
- 18 WATER RIGHTS
- 19-20 TITLE ISSUES



VICINITY MAP

NOT TO SCALE

TOTAL AREA SURVEYED:

584,204 SQ. FT (13.412 AC.)

ZONING:

NO ZONING REPORT WAS RECEIVED FROM THE CLIENT. IN LIEU OF SAID REPORT THE FOLLOWING INFORMATION WAS DISCOVERED ON THE CITY OF RIALTO WEBSITE:

ZONED (M-2) GENERAL MANUFACTURING
MINIMUM HEIGHT, BULK AND SPACE REQUIREMENTS ARE AS FOLLOWS:

A. BUILDING HEIGHT LIMIT, BUILDING HEIGHT LIMIT, UP TO SIX STORIES OR SEVENTY-FIVE FEET, WITH THE EXCEPTION THAT NO PORTION OF ANY BUILDING, OR ANY OTHER STRUCTURE NORMALLY PERMITTED TO EXCEED THE HEIGHT LIMIT IN SECTION 18.56.010, SHALL ENCROACH WITHIN THE NAVIGABLE AIRSPACE FOR THE RIALTO MUNICIPAL AIRPORT AS ESTABLISHED BY FEDERAL AVIATION REGULATION PART 77 (OBJECTS AFFECTING NAVIGABLE AIRSPACE);
B. FRONT YARD, TWENTY-FIVE FEET;
C. SIDE YARD, NONE, EXCEPT THAT ON LOTS SIDING TO AN R ZONE THERE SHALL BE A SIDE YARD OF NOT LESS THAN FIVE FEET;
D. REAR YARD, NONE, EXCEPT THAT ON LOTS WHICH REAR TO AN R ZONE A REAR YARD OF FIFTEEN FEET IS REQUIRED.

FLOOD NOTE:

SUBJECT PROPERTY PANEL NO. 06071C8657H (PANEL NOT PRINTED), DATED 8/28/2008. NO SPECIAL FLOOD HAZARD AREAS PER FEMA WEBSITE (ZONE X)

SURVEYOR'S NOTES:

A. AT THE TIME OF THE SURVEY NO CONSTRUCTION OR EARTH MOVING WORK OBSERVED.
B. NO VISIBLE EVIDENCE OF RECENT STREET OR SIDEWALK REPAIRS WERE OBSERVED ON SITE.
C. NO VISIBLE EVIDENCE OF THE SITE BEING USED AS A SOLID WASTE DUMP, SUMP, OR SANITARY LANDFILL.
D. NO VISIBLE EVIDENCE OF WETLANDS WITHIN THE SUBJECT SITE.
E. ACCESS TO THE PROPERTY IS FROM DURST AVENUE, A PUBLIC RIGHT-OF-WAY.
F. THE IMPROVEMENTS AND UTILITIES SHOWN HAVE BEEN LOCATED FROM AN AERIAL AND FIELD SURVEY OF ABOVE GROUND EVIDENCE ONLY. THE SURVEYOR MAKES NO GUARANTEES THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED.
G. DIMENSIONS SHOWN ARE IN FEET AND DECIMALS THEREOF. NO DISTANCES OR ANGLES SHOWN HEREON MAY BE ASSUMED BY SCALING.
H. THE PARCELS ARE CONTIGUOUS WITHOUT ANY GAPS, GORES OR HIATUSES.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY TO: (I) BCIF ACQUISITIONS LLC, AND ITS SUCCESSORS AND ASSIGNS; (II) FIRST AMERICAN TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 3, 4, 6(a), 7(a) & 13, 16, AND 17 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON 03/26/2021.

DATE OF PLAT OR MAP: 4/06/2021

DRAFT
MARK A. MONROE
LICENSED LAND SURVEYOR
REGISTRATION NO. 8170

04/06/21
DATE

LICENSED LAND SURVEYOR
MARK A. MONROE
No. 8170
STATE OF CALIFORNIA

DIGALERT
DIAL BEFORE YOU DIG — TWO WORKING DAYS BEFORE YOU DIG
TOLL FREE CALL: 811
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

No.	DESCRIPTION	DATE

REVISIONS

BASIS OF BEARINGS:
THE BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN CORS HORIZONTAL CONTROL STATIONS EWPP" AND "MLFP" BEARING NORTH 43°16'18" WEST (DISTANCES SHOWN HEREON ARE GROUND)

PREPARED FOR:
BCIF ACQUISITIONS LLC
518 17TH STREET, 17TH FLOOR
DENVER, CO 80202

PREPARED BY:
WestLAND Group, Inc. — Land Surveyors • Civil Engineers • GIS
4150 Concours ST., Suite 100, Ontario, CA 91764
PHONE: (909) 989-9789 FAX: (909) 989-9660
WWW.WESTLANDGROUP.NET

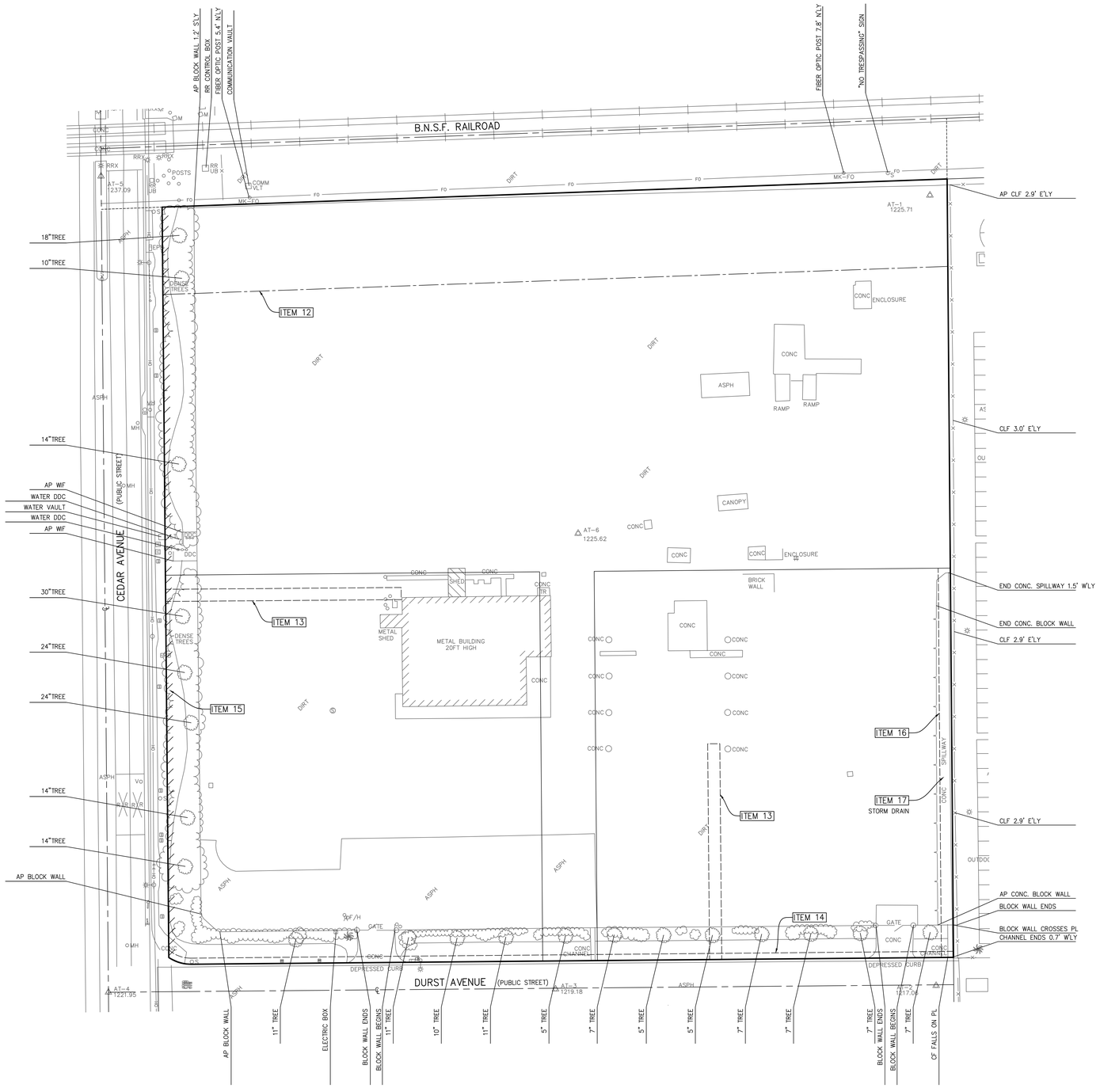
ALTA / NSPS LAND TITLE SURVEY

INDUSTRIAL PROPERTY
1230 WEST DURST DRIVE, RIALTO, CA

SCALE: 1" = 50'	DATE: APRIL 6, 2021	J.N. 2021-1007	SHEET: 1 OF 2

Plot: 6/4/2021 - 7:55 AM | Login Name: JSmith | Drawing Name: S:\2021\2021-1007\Dwg\ALTA 1 OF 2.dwg

ALTA / NSPS LAND TITLE SURVEY



40' 0 40' 80'

(IN FEET)
1 INCH = 40 FEET

ABBREVIATIONS

ASPH	ASPHALT
AP	ANGLE POINT
BC	BUILDING CORNER
BFP	BACK FLOW PREVENTER
BW	BACK OF SIDEWALK
CB	CATCH BASIN
CONC	CONCRETE
CF	CURB FACE
CIP	CAST IRON PIPE
CL	CENTER LINE
CLF	CHAIN LINK FENCE
CO	CLEANOUT
DI	DROP INLET
DO	DRAIN OUTLET
DWY	DRIVEWAY
EOA	EDGE OF ASPHALT
EOC	EDGE OF CONCRETE
EOD	EDGE OF DRIVE
EOP	EDGE OF PAVEMENT
EPB	ELECT. PULL BOX
FCR	FENCE CORNER
FG	FINISHED GRADE
FL	FLOW LINE
FF	FINISHED FLOOR
FH	FIRE HYDRANT
FS	FINISHED SURFACE
GM	GAS METER
GRD	GROUND
GW	GUY WIRE
HB	HOSE BIB
HDWL	CONC HEADWALL
INV	INVERT
LIP	LIP OF CURB
LP	LIGHT POLE
LS	LIGHT STANDARD
MH	MANHOLE
MS	MOW STRIP
NG	NATURAL GROUND
OH	OVERHEAD WIRES
PA	PLANTING AREA
PB	PULL BOX
PKY	PARKWAY
PL	PROPERTY LINE
PP	POWER POLE
PVMT	PAVEMENT
RCP	REINFORCED CONC. PIPE
RRX	RAILROAD SIGNAL
RW	RETAINING WALL
S	SANITARY SEWER
SCW	SCREEN WALL
SD	STORM DRAIN
SDR	SLOT DRAIN
S.F.	SQUARE FEET
SHR	STEEL HAND RAIL
SMH	SEWER MANHOLE
SW	SIDEWALK
TA	TREE AREA
TBH	TOP OF BULKHEAD
TBS	TOP OF BOTTOM STEP
TC	TOP OF CURB
TCB	TOP OF CATCH BASIN
TE	TRASH ENCLOSURE
TFP	ELECT. TRANSFORMER PAD
TG	TOP OF GRATED INLET
THW	TOP OF HEADWALL
TOP	TOP OF PIPE
TOE	TOE OF SLOPE
TL	TRAFFIC LIGHT
TRC	TREE-CONIFEROUS
TRD	TREE-DECIDUOUS
TRF	TREE-FRUIT
TRP	TREE-PALM
TS	TRAFFIC SIGNAL
TSCB	TRAFFIC SIGNAL CONTROL BOX
TSPB	TRAFFIC SIGNAL PULL BOX
TTS	TOP OF TOP STEP
TK	TANK
TYP	TYPICAL
UB	UTILITY BOX
UCB	UTILITY CONTROL BOX
UP	UTILITY POLE
VCP	VITRAFIED CLAY PIPE
WF	WOOD FENCE
WIF	WROUGHT IRON FENCE
WM	WATER METER
WV	WATER VALVE
WVLT	WATER VAULT
YD	YARD/AREA DRAIN

LEGEND

CONC	CONCRETE
ASPH	ASPHALT
	TREE
	BUSH
	PALM TREE
O M/B	MAIL BOX
	LIGHT STANDARD
TS	TRAFFIC SIGNAL
	STREET LIGHT
	SIGN (10') SIGN (5')
O LS	LARGE SIGN POST
CB	CATCH BASIN
DI	DROP INLET
O LP	LIGHT POLE
O M	PARKING METER
ODI	DROP INLET
O RRS	R.R. SIGNAL
O S	SIGN
R F/H	FIRE HYDRANT
	POWER POLE
	TRANSFORMER BOX
	GUYWIRE/ANCHOR
M	METER
O	POST (NO LABEL)
O V	VALVE
O MH	MANHOLE
UB	HANDICAP UTILITY BOX
O SP	STAND PIPE
x x x	FENCE
x x x	RETAIN WALL/FENCE
	RETAINING WALL
	TREE LINE
	BRUSH LINE
	ELECTRICAL PULL BOX
	FIRE HYDRANT
	SEWER MAN HOLE
	SEWER CLEAN OUT
	STREET LIGHT PULL BOX
T	TELEPHONE PULL BOX
	TRAFFIC SIGNAL PULL BOX
	WATER METER
	UTILITY POLE
	SEWER CLEAN OUT

DIGALERT
DIAL BEFORE YOU DIG — TWO WORKING DAYS BEFORE YOU DIG
TOLL FREE CALL: 811
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

No.	REVISIONS DESCRIPTION	DATE

BENCHMARK:
CITY OF RIALTO BENCHMARK "022-88" :
CITY OF RIALTO BRASS DISC SET IN N/E CORNER PCC SIDEWALK DRAIN, 12FT N. OF CURB & 43' N. OF CENTERLINE OF MERRILL AVENUE & 497' E. OF CENTERLINE OF CEDAR AVE., WITH AN ELEVATION OF 1210.483' (NGVD'29)

PREPARED FOR:
BCIF ACQUISITIONS LLC
518 17TH STREET, 17TH FLOOR
DENVER, CO 80202

PREPARED BY:

WestLAND Group, Inc. Land Surveyors • Civil Engineers • GIS
4150 Concours st., Suite 100, Ontario, CA 91764
PHONE: (909) 989-9789 FAX: (909) 989-9660
WWW.WESTLANDGROUP.NET

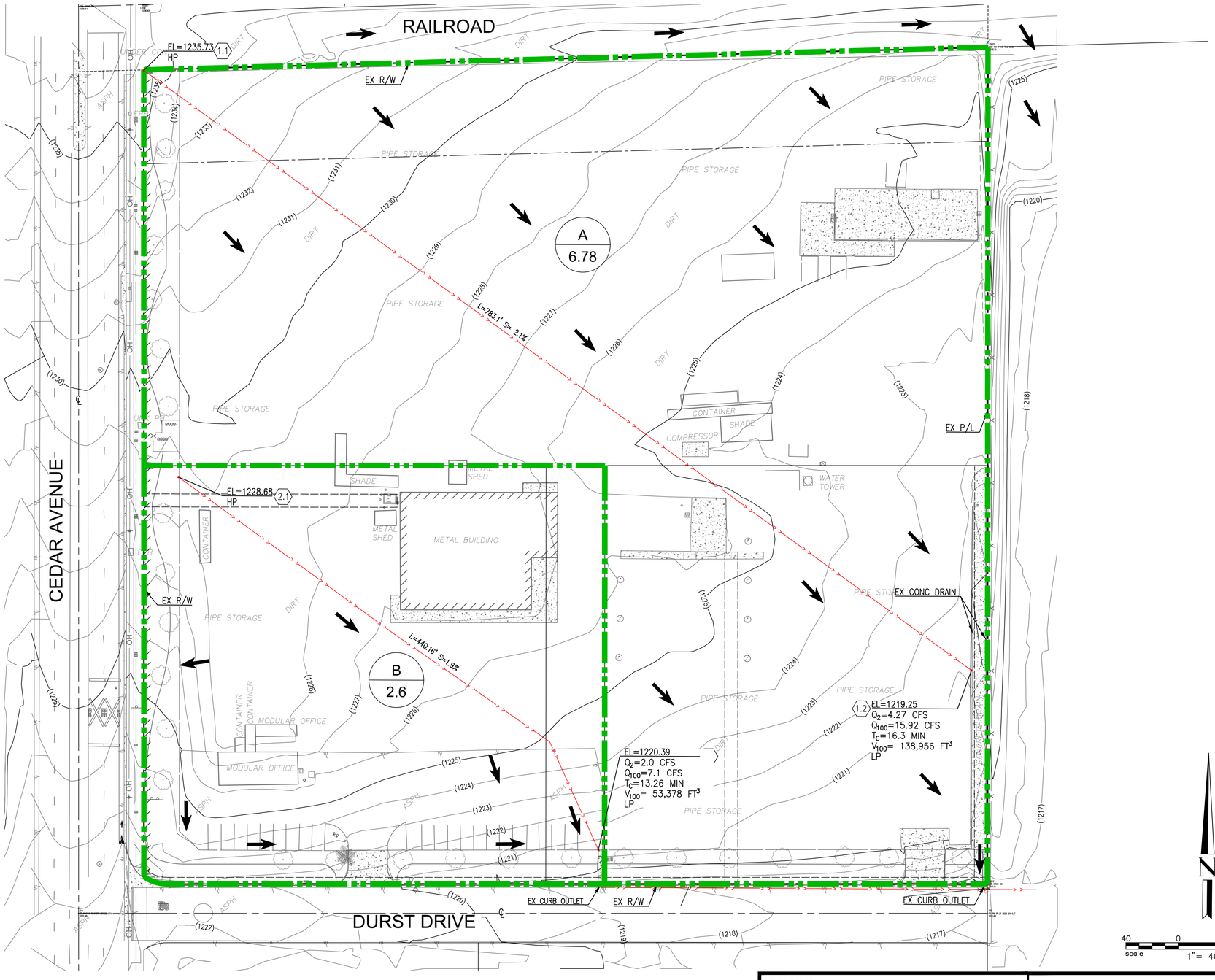
ALTA / NSPS LAND TITLE SURVEY

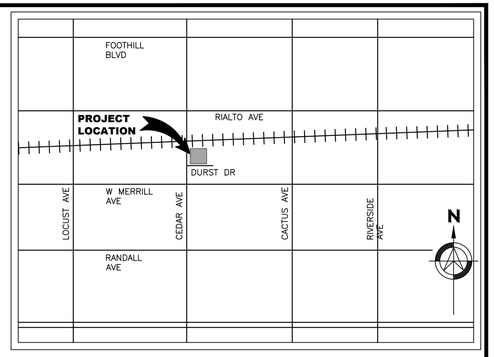
INDUSTRIAL SITE
1230 DURST DRIVE., RIALTO, CA

SCALE: 1" = 40' | DATE: APRIL 6, 2021 | J.N. 2021-100 | SHEET: 2 OF 2

I:\Projects\2021-100 - 1230 E Durst Drive, Rialto\ALTA\2021-100 ALTA.dwg, May 06, 2021 - 10:49am, Jeremiah Lopez

CITY OF RIALTO
HYDROLOGY EXHIBIT
CEDAR AVENUE AND DURST DRIVE
PRE-DEVELOPED CONDITION





VICINITY MAP
N.T.S.

LEGEND:

- DRAINAGE AREA BOUNDARY
- LONGEST WATERCOURSE
- PROPOSED FLOW DIRECTION ARROW
- A / X-XXX — DRAINAGE SUB AREA DESIGNATION / AREA (AC)
- # — NODE #
- HP, LP — HIGH POINT, LOW POINT
- X% — LONGEST DRAINAGE WATERCOURSE SLOPE
- X' — LONGEST DRAINAGE WATERCOURSE

HYDROLOGY INFORMATION

SITE AREA:	9.38 ACRE	
SOIL GROUP:	A	(PER SBC SOIL GROUP MAP FIG. C-15)
IMPERVIOUS:	13% (PER CALCULATIONS)	
ISOHYETALS	1.46"	(100-YEAR 1 HOUR)
	0.586"	(2-YEAR 1 HOUR)
CN NUMBER:	78	(SOIL GROUP A)
FREQUENCY:	100 YEAR	(FOR STORM DARIN DESIGN)
	2 YEAR	(FOR STORMWATER QUALITY)
METHOD:	SAN BERNARDINO COUNTY HYDROLOGY MANUAL	

N

40 0 40 80
scale 1"= 40' feet

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WestLAND Group, Inc. Land Surveyors • Civil Engineers • GIS
4150 CONCOURS, ONTARIO, CA 91764
PHONE: (909) 989-9789 FAX: (909) 989-9660
JOB NO: 2018-131

CEDAR AVENUE AND DURST DRIVE
PRE-DEVELOPED EXHIBIT

CITY OF RIALTO

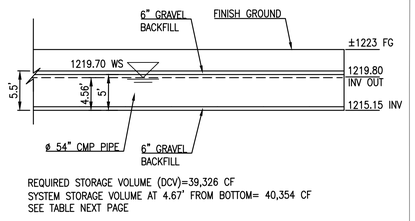
DATE: JUN 2021
SHEET 1 OF 2

Drawing Name: P:\Year_2021\2021-100 1230 W Durst Rialto - Block Creek Group\06 Engineering\LD\Reports\WQMP\3_Exhibits\2021-100_PRE - Prelim.dwg Last Opened: Oct 13, 2021 - 7:46am by: rihome.sawirls

CITY OF RIALTO
HYDROLOGY EXHIBIT
CEDAR AVENUE AND DURST DRIVE
POST-DEVELOPED CONDITION

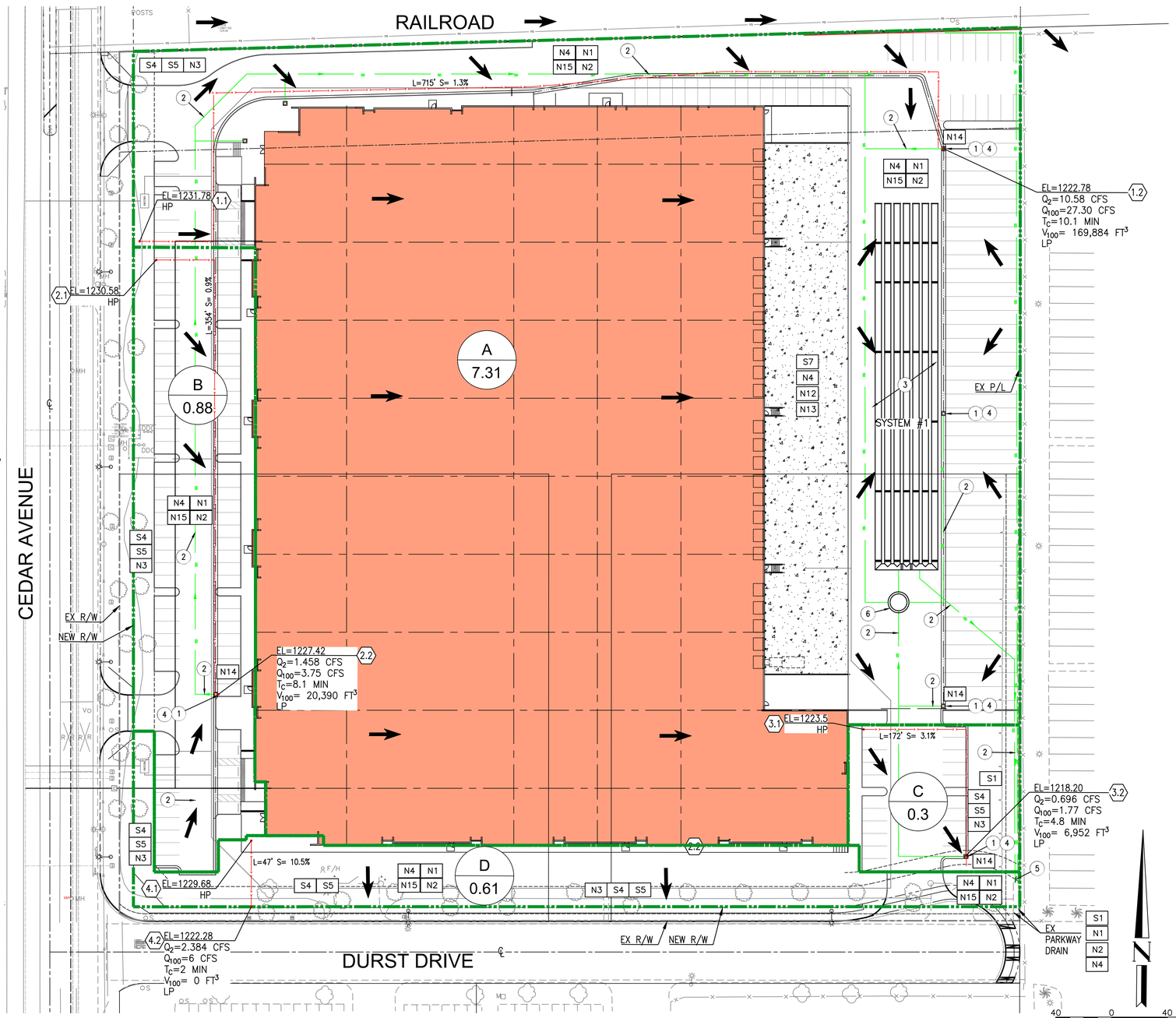
SOURCE CONTROL BMPs

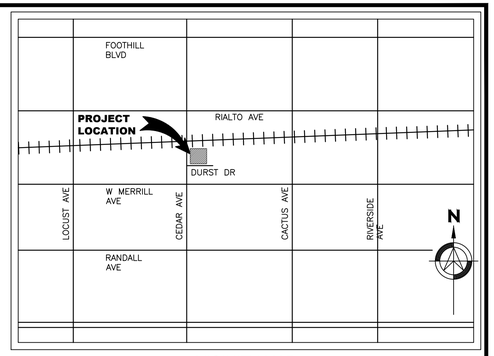
S1	STORM DRAIN STENCILING
S4	EFFICIENT IRRIGATION SYSTEM
S5	DEPRESSED LANDSCAPE AREA
S7	LOADING DECK AREA
N1	EDUCATION OF PROPERTY OWNER
N2	ACTIVITY RESTRICTIONS
N3	LANDSCAPE AREAS
N4	BMP MAINTENANCE
N12	EMPLOYEE TRAINING
N13	HOUSEKEEPING OF LOADING DOCKS
N14	CATCH BASIN INSPECTIONS
N15	VACUUM SWEEPING OF PAVED AREAS



REQUIRED STORAGE VOLUME (DCV)=39,326 CF
SYSTEM STORAGE VOLUME AT 4.67' FROM BOTTOM= 40,354 CF
SEE TABLE NEXT PAGE

WATER SURFACE ELEVATION DETAIL
N.T.S.





VICINITY MAP
N.T.S.

LEGEND:

- DRAINAGE AREA BOUNDARY
- LONGEST WATERCOURSE
- PROPOSED FLOW DIRECTION ARROW
- A / X-XXX — DRAINAGE SUB AREA DESIGNATION / AREA (AC)
- # — NODE #
- HP, LP — HIGH POINT, LOW POINT
- X% — LONGEST DRAINAGE WATERCOURSE SLOPE
- X' — LONGEST DRAINAGE WATERCOURSE
- BUILDING
- UNDERGROUND INFILTRATION SYSTEM

HYDROLOGY INFORMATION

SITE AREA:	9.38 ACRE	
SOIL GROUP:	A	(PER SBC SOIL GROUP MAP FIG. C-15)
IMPERVIOUS:	13% (PER CALCULATIONS)	
ISOHYETALS	1.46"	(100-YEAR 1 HOUR)
	0.586"	(2-YEAR 1 HOUR)
CN NUMBER:	89	(SOIL GROUP A)
FREQUENCY:	100 YEAR	(FOR STORM DARIN DESIGN)
	2 YEAR	(FOR STORMWATER QUALITY)
METHOD:	SAN BERNARDINO COUNTY HYDROLOGY MANUAL	

DRAINAGE NOTES:

1. PROPOSED CATCH BASIN WITH FILTER INSERT
2. PROPOSED STORM DRAIN PIPE PRIVATE MAINTAINED
3. PROP. LID DEVICE- CMP UNDERGROUND INFILTRATION SYSTEM
4. PROPOSED CATCH BASIN STENSIL
5. PROPOSED CONCRETE CHANNEL
6. PROPOSED CDS HYDRODYNAMIC SEPARATOR

NOTE:
1. ALL ON-SITE STORM DRAINS ARE PRIVATE STORM DRAIN SYSTEMS, NOT TO BE MAINTAINED BY THE CITY OF ONTARIO.
2. ALL ON-SITE BMP'S & UNDERGROUND INFILTRATION SYSTEMS TO BE MAINTAINED BY OWNER
3. CONTRACTOR SHALL VERIFY INFILTRATION RATES WITH SOILS ENGINEERS AFTER GRADING OPERATIONS AND PRIOR TO INSTALLATION OF UNDERGROUND INFILTRATION SYSTEM.

	BMPs / Detention Summary							
Drainage Area No.	Drainage Sub-Area	Tributary Area (AC)	Imprevious Ratio	2-YR Storm (CFS)	P6	CBMP	Required Design Capture Volume (CF)	Provided CMP infitration system (CF)
DA1 DMA	A	7.31	0.98	10.58	0.87	0.70	39,326	45,098
	B	0.88	0.73	1.458				
	C	0.30	0.62	0.696				
	D	0.61	0.03	2.384				

PREPARED BY:
WestLAND Group, Inc. Land Surveyors • Civil Engineers • GIS
4150 CONCOURS, ONTARIO, CA 91764
PHONE: (909) 989-9789 FAX: (909) 989-9660
JOB NO: 2018-131

CEDAR AVENUE AND DURST DRIVE
POST-DEVELOPED EXHIBIT

CITY OF RIALTO

DATE: JUN 2021
SHEET 2 OF 2

Drawing Name: P:\Year_2021\2021-100 1230 W Durst Rialto - Block Creek Group\06 Engineering\LD\Reports\WQMP\3_Exhibits\2021-100_POST - Prelim.dwg Last Opened: Oct 25, 2021 - 2:32pm by: rhame.sawris

Section 6.1

Attachment C

- Treatment Control BMPs Fact Sheets
- BMPs & LID Devices Details

Drain Inserts MP-52

Description

Drain inserts are manufactured filters or fabric placed in a drop inlet to remove sediment and debris. There are a multitude of inserts of various shapes and configurations, typically falling into one of three different groups: socks, boxes, and trays. The sock consists of a fabric, usually constructed of polypropylene. The fabric may be attached to a frame or the grate of the inlet holds the sock. Socks are meant for vertical (drop) inlets. Boxes are constructed of plastic or wire mesh. Typically a polypropylene "bag" is placed in the wire mesh box. The bag takes the form of the box. Most box products are one box; that is, the setting area and filtration through media occur in the same box. Some products consist of one or more trays or mesh grates. The trays may hold different types of media. Filtration media vary by manufacturer. Types include polypropylene, porous polymer, treated cellulose, and activated carbon.

California Experience

The number of installations is unknown but likely exceeds a thousand. Some users have reported that these systems require considerable maintenance to prevent plugging and bypass.

Advantages

- Does not require additional space as inserts as the drain inlets are already a component of the standard drainage systems.
- Easy access for inspection and maintenance.
- As there is no standing water, there is little concern for mosquito breeding.
- A relatively inexpensive retrofit option.

Limitations

Performance is likely significantly less than treatment systems that are located at the end of the drainage system such as ponds and vaults. Usually not suitable for large areas or areas with trash or leaves than can plug the insert.

Design and Sizing Guidelines

Refer to manufacturer's guidelines. Drain inserts come any many configurations but can be placed into three general groups: socks, boxes, and trays. The sock consists of a fabric, usually constructed of polypropylene. The fabric may be attached to a frame or the grate of the inlet holds the sock. Socks are meant for vertical (drop) inlets. Boxes are constructed of plastic or wire mesh. Typically a polypropylene "bag" is placed in the wire mesh box. The bag takes the form of the box. Most box products are

Design Considerations

- Use with other BMPs
- Fit and Seal Capacity within Inlet

Targeted Constituents

- ☑ Sediment
- ☑ Nutrients
- ☑ Trash
- ☑ Metals
- Bacteria
- ☑ Oil and Grease
- ☑ Organics

Removal Effectiveness

See New Development and Redevelopment Handbook-Section 5.

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

one box; that is, the setting area and filtration through media occurs in the same box. One manufacturer has a double-box. Stormwater enters the first box where setting occurs. The stormwater flows into the second box where the filter media is located. Some products consist of one or more trays or mesh grates. The trays can hold different types of media. Filtration media vary with the manufacturer: types include polypropylene, porous polymer, treated cellulose, and activated carbon.

Construction/Inspection Considerations

Be certain that installation is done in a manner that makes certain that the stormwater enters the unit and does not leak around the perimeter. Leakage between the frame of the insert and the frame of the drain inlet can easily occur with vertical (drop) inlets.

Performance

Few products have performance data collected under field conditions.

Siting Criteria

It is recommended that inserts be used only for retrofit situations or as pretreatment where other treatment BMPs presented in this section area used.

Additional Design Guidelines

Follow guidelines provided by individual manufacturers.

Maintenance

Likely require frequent maintenance, on the order of several times per year.

Cost

- The initial cost of individual inserts ranges from less than $100 to about $2,000. The cost of using multiple units in curb inlet drains varies with the size of the inlet.
- The low cost of inserts may tend to favor the use of these systems over other, more effective treatment BMPs. However, the low cost of each unit may be offset by the number of units that are required, more frequent maintenance, and the shorter structural life (and therefore replacement).

References and Sources of Additional Information

Hrachovec, R., and G. Minton, 2001, Field testing of a sock-type catch basin insert, Planet CPR, Seattle, Washington

Interagency Catch Basin Insert Committee, Evaluation of Commercially-Available Catch Basin Inserts for the Treatment of Stormwater Runoff from Developed Sites, 1995

Larry Walker Associates, June 1998, NDMP Inlet/In-Line Control Measure Study Report

Manufacturers literature

Santa Monica (City), Santa Monica Bay Municipal Stormwater/Urban Runoff Project - Evaluation of Potential Catch basin Retrofits, Woodward Clyde, September 24, 1998

Woodward Clyde, June 11, 1996, Parking Lot Monitoring Report, Santa Clara Valley Nonpoint Source Pollution Control Program.

FloGard +Plus® Catch Basin Insert Filter

Inlet Filtration

Removes pollutants from runoff at the source

FloGard +Plus is a catch basin insert filter designed to remove sediment, gross solids, trash, and petroleum hydrocarbons from stormwater runoff. FloGard +Plus is ideally suited for removal of primary pollutants from paved surfaces in commercial and residential areas. Rated filter flow capacities are designed to exceed the required "first flush" treatment flow rate, and the unique dual-bypass design typically exceeds catch basin inlet capacity.

Economical Treatment
Quick, easy, and cost-effective to install, inspect, and maintain.

Efficient Performance
Removes pollutants at the inlet where they are easiest to catch.

Versatile Applications
Appropriate and easy to use on new construction or retrofit projects.

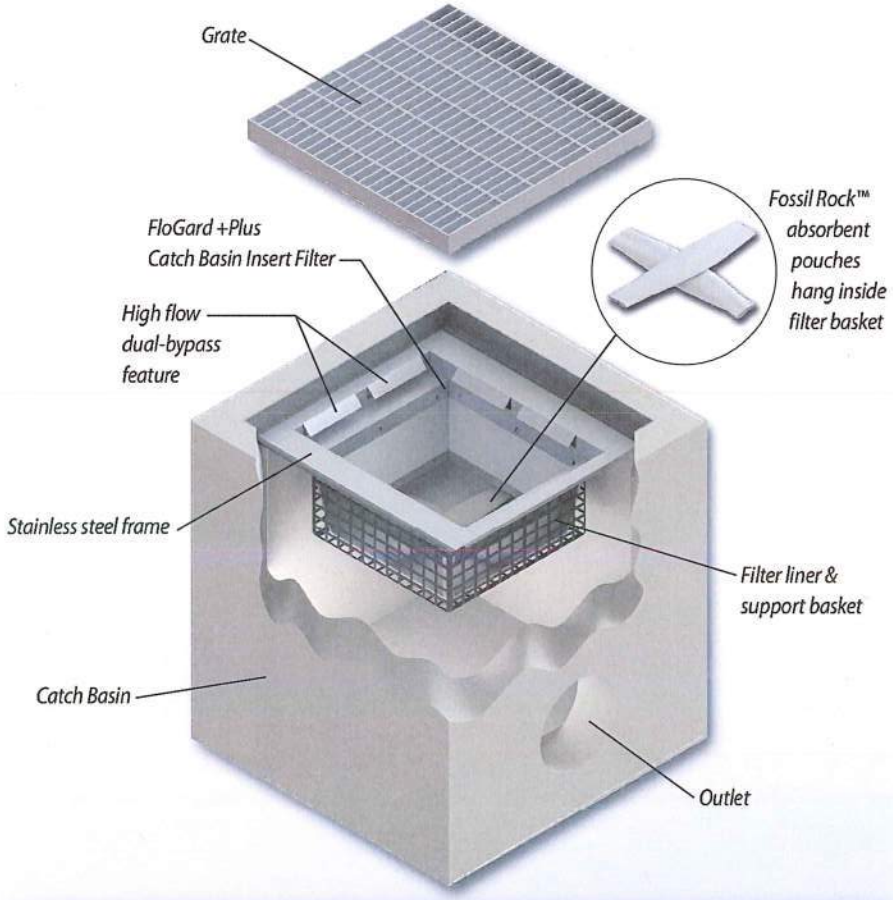
Flexible Design
Available in a wide variety of sizes and configurations, including custom options.

Durable Construction
Built to last and withstand the loads from captured pollutants.

Environmentally Friendly
No standing water minimizes vector, bacteria, and odor problems.

Proven Performance
Field and laboratory tested with up to 86%[1] removal of TSS and 80%[2] removal of oils and grease.

1. University of Auckland laboratory testing of local street sweep material.
2. UCLA laboratory study.



How It Works:
Flows entering the unit pass through the filter liner basket for removal of sediment, trash, and debris. Optional Fossil Rock™ sorbent pouches installed in the basket effect hydrocarbon capture. As the storm flow exceeds the treatment flow rate, treatment will continue and excess flows will pass through the dual-bypass openings near the top of the unit.

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FloGard +Plus Catch Basin Insert Filter

Catch basin insert designed to capture sediment, gross solids, trash, and petroleum hydrocarbons from low (first flush) flows, even during the most extreme weather conditions.

Example Types, Sizes, and Capacities

Additional sizes, including regional and custom options are available.

FloGard Combination Inlet SPECIFIER CHART								
MODEL NO. STANDARD DEPTH	STANDARD & SHALLOW DEPTH (Data in these columns is the same for both STANDARD & SHALLOW versions)			STANDARD DEPTH -20 Inches-		MODEL NO. SHALLOW DEPTH	SHALLOW DEPTH -12 Inches-	
	INLET ID Inside Dimension (Inch x Inch)	GRATE OD Outside Dimension (Inch x Inch)	TOTAL BYPASS CAPACITY (cu. ft. / sec.)	SOLIDS STORAGE CAPACITY (cu. ft.)	FILTERED FLOW (cu. ft. / sec.)		SOLIDS STORAGE CAPACITY (cu. ft.)	FILTERED FLOW (cu. ft. / sec.)
FGP-1633FGO	16 X 33	18 X 36	7.0	2.5	1.7	FGP-1633FGO8	1.4	1.1
FGP-1836FGO	18 X 36	18 X 40	6.9	2.3	1.6	FGP-1836FGO8	1.3	.9
FGP-2234FGO	22 X 34	24 X 36	8.1	3.6	2.1	FGP-2234FGO8	2.1	1.4
FGP-2436FGO	24 X 36	24 X 40	8.0	3.4	2.0	FGP-2436FGO8	1.95	1.15



Combination Inlet

FloGard Flat Grated Inlet SPECIFIER CHART								
MODEL NO. STANDARD DEPTH	STANDARD & SHALLOW DEPTH (Data in these columns is the same for both STANDARD & SHALLOW versions)			STANDARD DEPTH -20 Inches-		MODEL NO. SHALLOW DEPTH	SHALLOW DEPTH -12 Inches-	
	INLET ID Inside Dimension (Inch x Inch)	GRATE OD Outside Dimension (Inch x Inch)	TOTAL BYPASS CAPACITY (cu. ft. / sec.)	SOLIDS STORAGE CAPACITY (cu. ft.)	FILTERED FLOW (cu. ft. / sec.)		SOLIDS STORAGE CAPACITY (cu. ft.)	FILTERED FLOW (cu. ft. / sec.)
FGP-12F	12 X 12	12 X 14	2.8	0.3	0.4	FGP-12F8	.15	.25
FGP-16F	16 X 16	16 X 19	4.7	0.8	0.7	FGP-16F8	.45	.4
FGP-18F	18 X 18	18 X 20	4.7	0.8	0.7	FGP-18F8	.45	.4
FGP-1836F	18 X 36	18 X 40	6.9	2.3	1.6	FGP-1836F8	1.3	.9
FGP-21F	22 X 22	22 X 24	6.1	2.2	1.5	FGP-21F8	1.25	.85
FGP-24F	24 X 24	24 X 27	6.1	2.2	1.5	FGP-24F8	1.25	.85
FGP-2436F	24 X 36	24 X 40	8.0	3.4	2.0	FGP-2436F8	1.95	1.15
FGP-2448F	24 X 48	24 X 48	9.3	4.4	2.4	FGP-2448F8	2.5	1.35
FGP-32F-TN	28 X 28	32 X 32	6.3	2.2	1.5	FGP-32F8-TN	1.25	.85
FGP-30F	30 X 30	30 X 34	8.1	3.6	2.0	FGP-30F8	2.05	1.15
FGP-36F	36 X 36	36 X 40	9.1	4.6	2.4	FGP-36F8	2.65	1.35
FGP-3648F	36 X 48	40 X 48	11.5	6.8	3.2	FGP-3648F8	3.9	1.85
FGP-48F	48 X 48	48 X 54	13.2	9.5	3.9	FGP-48F8	5.45	2.25
FGP-1633F	16 X 34	18 X 36	6.9	2.3	1.6	FGP-1633F8	1.3	.9
FGP-2234F	22 X 34	24 X 36	8.0	3.4	2.0	FGP-2234F8	1.95	1.15



Flat Grated Inlet

FloGard Circular Grated Inlet SPECIFIER CHART					
MODEL NUMBER	INLET ID (Ø INCHES)	GRATE OD (Ø INCHES)	SOLIDS STORAGE CAPACITY (CU FT)	FILTERED FLOW (CFS)	TOTAL BYPASS CAPACITY (CFS)
FGP-RF15F	15	18	0.3	0.4	2.8
FGP-RF18F	18	20	0.8	0.7	4.7
FGP-RF20F	20	23	0.8	0.7	4.7
FGP-RF21F	21	23.5	0.8	0.7	4.7
FGP-RF22F	22	24	0.8	0.7	4.7
FGP-RF24F	24	26	0.8	0.7	4.7
FGP-RF30F	30	32	2.2	1.5	6.1
FGP-RF36F	36	39	3.6	2.0	8.1



Circular Frame Catch Basin

Visit our website: oldcastlestormwater.com or call (800) 579-8819 for additional sizes and options.

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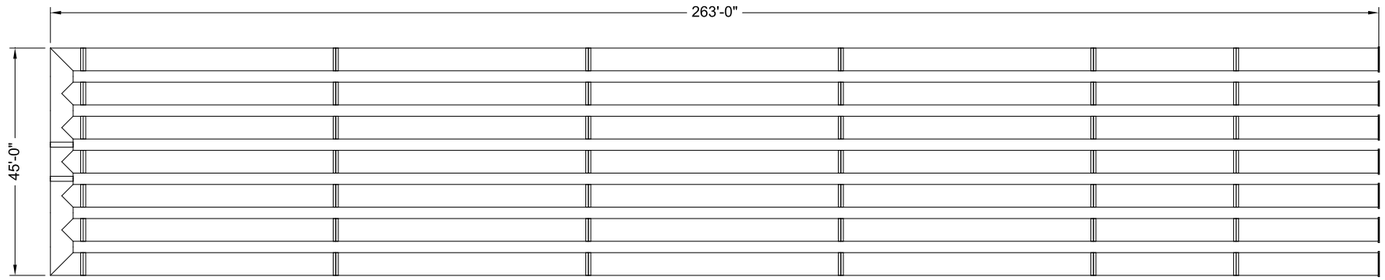
PROJECT SUMMARY

CALCULATION DETAILS
- LOADING = HS20 & HS25
- APPROX. LINEAR FOOTAGE = 1,855 lf.

STORAGE SUMMARY
- STORAGE VOLUME REQUIRED = 45,000 cf.
- PIPE STORAGE VOLUME = 29,495 cf.
- BACKFILL STORAGE VOLUME = 15,603 cf.
- TOTAL STORAGE PROVIDED = 45,098 cf.

PIPE DETAILS
- DIAMETER = 54 IN.
- CORRUGATION = 5x1
- GAGE = 16
- COATING = ALT2
- WALL TYPE = Perforated
- BARRELL SPACING = 27 IN.

BACKFILL DETAILS
- WIDTH AT ENDS = 12 IN.
- ABOVE PIPE = 6 IN.
- WIDTH AT SIDES = 12 IN.
- BELOW PIPE = 6 IN.



NOTES

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE. ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
- ALL RISERS AND STUBS ARE $2\frac{2}{3}$" x $\frac{1}{2}$" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- BAND TYPE TO BE DETERMINED UPON FINAL DESIGN.
- THE PROJECT SUMMARY IS REFLECTIVE OF THE DYODS DESIGN, QUANTITIES ARE APPROX. AND SHOULD BE VERIFIED UPON FINAL DESIGN AND APPROVAL. FOR EXAMPLE, TOTAL EXCAVATION DOES NOT CONSIDER ALL VARIABLES SUCH AS SHORING AND ONLY ACCOUNTS FOR MATERIAL WITHIN THE ESTIMATED EXCAVATION FOOTPRINT.
- THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.

ASSEMBLY

SCALE: 1" = 30'

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CONTECH® CMP DETENTION SYSTEMS
CONTECH **DYODS** DRAWING

DYO8449 RIALTO 2
DCV
Rialto, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
5269	8449	10/13/2021
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D1		

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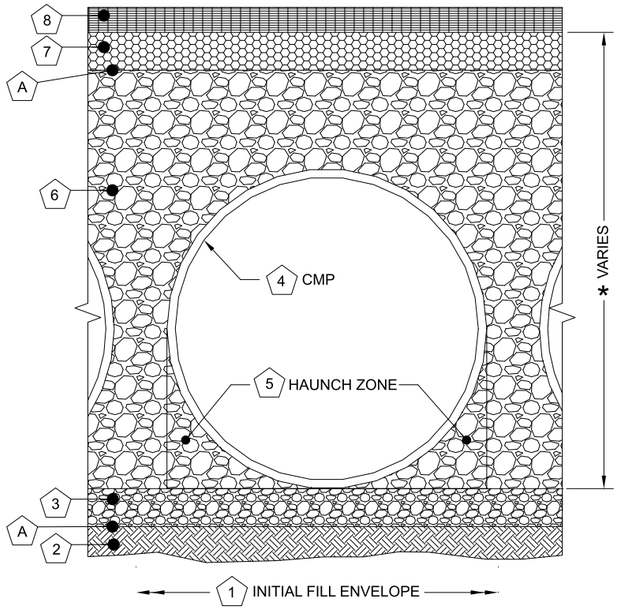


Infiltration Systems - CMP Infiltration & CMP Perforated Drainage Pipe			
Material Location	Description	Material Designation	Designation
8 Rigid or Flexible Pavement (if applicable)			
7 Road Base (if applicable			
A Geotextile Layer	Non-Woven Geotextile	CONTECH C-40 or C-45	Engineer Decision for consideration to prevent soil migration into varying soil types. Wrap the trench only.
6 Backfill	Infiltration pipe systems have a pipe perforation sized of 3/8" diameter. An open graded, free draining stone, with a particle size of ½" – 2 ½" diameter is recommended.	AASHTO M 145-A-1 or AASHTO M 43 - 3, 4	Material shall be worked into the pipe haunches by means of shovel-slicing, rodding, air-tamper, vibratory rod, or other effective methods. Compaction of all placed fill material is necessary and shall be considered adequate when no further yielding of the material is observed under the compactor, or under foot, and the Project Engineer or his representative is satisfied with the level of compaction"
3 Bedding Stone	Well graded granular bedding material w/maximum particle size of 3"	AASHTO M43 - 3,357,4,467, 5, 56, 57	For soil aggregates larger than 3/8" a dedicated bedding layer is not required for CMP. Pipe may be placed on the trench bottom comprised of native suitable well graded & granular material. For Arch pipes it is recommended to be shaped to a relatively flat bottom or fine-grade the foundation to a slight v-shape. Soil aggregates less than 3/8" and unsuitable material should be over-excavated and re-placed with a 4"-6" layer of well graded & granular stone per the material designation.
A Geotextile Layer	None	None	Contech does not recommend geotextiles be placed under the invert of Infiltration systems due to the propensity for geotextiles to clog over time.
* Note: The listed AASHTO designations are for gradation only. The stone must also be angular and clean.			

1 MINIMUM WIDTH DEPENDS ON SITE CONDITIONS AND ENGINEERING JUDGEMENT.

FOUNDATION/BEDDING PREPARATION

2 PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND BROUGHT BACK TO THE GRADE WITH A FILL MATERIAL AS APPROVED BY THE ENGINEER.

5 HAUNCH ZONE MATERIAL SHALL BE PLACED AND UNIFORMLY COMPACTED WITHOUT SOFT SPOTS.

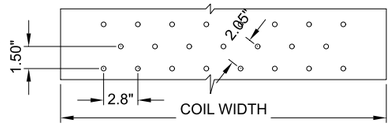
BACKFILL

MATERIAL SHALL BE PLACED IN 8"-10" MAXIMUM LIFTS. INADEQUATE COMPACTION CAN LEAD TO EXCESSIVE DEFLECTIONS WITHIN THE SYSTEM AND SETTLEMENT OF THE SOILS OVER THE SYSTEM. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO-LIFT DIFFERENTIAL BETWEEN THE SIDES OF ANY PIPE IN THE SYSTEM AT ALL TIMES DURING THE BACKFILL PROCESS. BACKFILL SHALL BE ADVANCED ALONG THE LENGTH OF THE SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON ANY PIPES IN THE SYSTEM.

EQUIPMENT USED TO PLACE AND COMPACT THE BACKFILL SHALL BE OF A SIZE AND TYPE SO AS NOT TO DISTORT, DAMAGE, OR DISPLACE THE PIPE. ATTENTION MUST BE GIVEN TO PROVIDING ADEQUATE MINIMUM COVER FOR SUCH EQUIPMENT. MAINTAIN BALANCED LOADING ON ALL PIPES IN THE SYSTEM DURING ALL SUCH OPERATIONS.

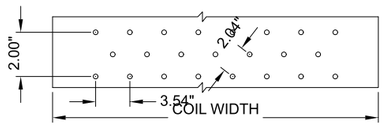
OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS. REFER TO TYPICAL BACKFILL DETAIL FOR MATERIAL REQUIRED.

2 2/3" x 1/2" CORRUGATION - STEEL AND ALUMINUM CMP EDGE SPACING EQUAL ON BOTH SIDES



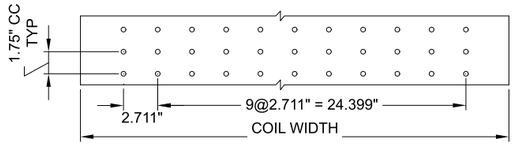
OPEN AREA = 3.76 SQ IN/SQ FT

3" x 1" CORRUGATION - STEEL AND ALUMINUM CMP (COIL PROVIDED FROM CONTECH LANTANA, FL PLANT)



OPEN AREA = 4.16 SQ IN/SQ FT

5" x 1" CORRUGATION - STEEL ONLY
EDGE SPACING EQUAL ON BOTH SIDES



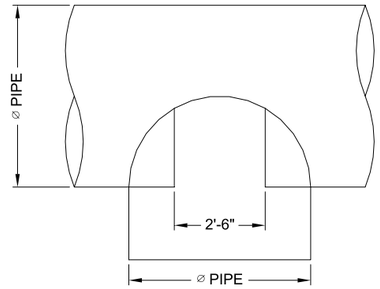
OPEN AREA = 3.33 SQ IN/SQ FT

NOTES:

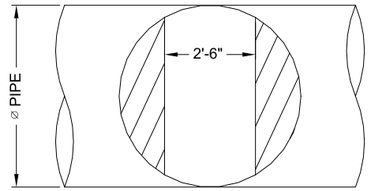
1. PERFORATIONS MEET AASHTO AND ASTM SPECIFICATIONS.
2. PERFORATION OPEN AREA PER SQUARE FOOT OF PIPE IS BASED ON THE NOMINAL DIAMETER AND LENGTH OF PIPE.
3. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
4. ALL HOLES ⌀3/8".

TYPICAL PERFORATION DETAIL

SCALE: N.T.S.



PLAN

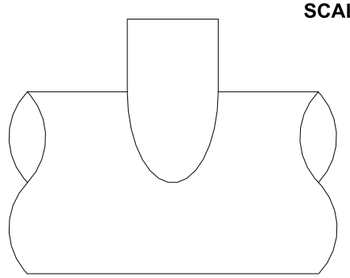


FRONT

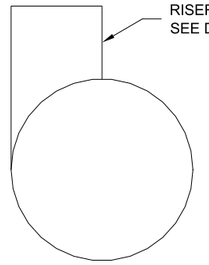
TYPICAL MANWAY DETAIL

SCALE: N.T.S.

NOTE:
MANWAY DETAIL APPLICABLE FOR CMP SYSTEMS WITH DIAMETERS 48" AND LARGER. MANWAYS MAY BE REQUIRED ON SMALLER SYSTEMS DEPENDING ON ACTUAL SITE SPECIFIC CONDITIONS.



ELEVATION

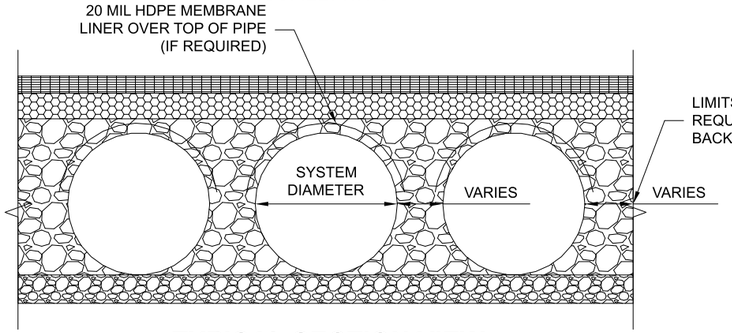


END

NOTE:
LADDERS ARE OPTIONAL AND ARE NOT REQUIRED FOR ALL SYSTEMS.

TYPICAL RISER DETAIL

SCALE: N.T.S.



TYPICAL SECTION VIEW

LINER OVER ROWS
SCALE: N.T.S.

NOTE: IF SALTING AGENTS FOR SNOW AND ICE REMOVAL ARE USED ON OR NEAR THE PROJECT, AN HDPE MEMBRANE LINER IS RECOMMENDED WITH THE SYSTEM. THE IMPERMEABLE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM A CHANGE IN THE SURROUNDING ENVIRONMENT OVER A PERIOD OF TIME. PLEASE REFER TO THE CORRUGATED METAL PIPE DETENTION DESIGN GUIDE FOR ADDITIONAL INFORMATION.

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CONTECH CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO8449 RIALTO 2
DCV
Rialto, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
5269	8449	10/13/2021
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D2		

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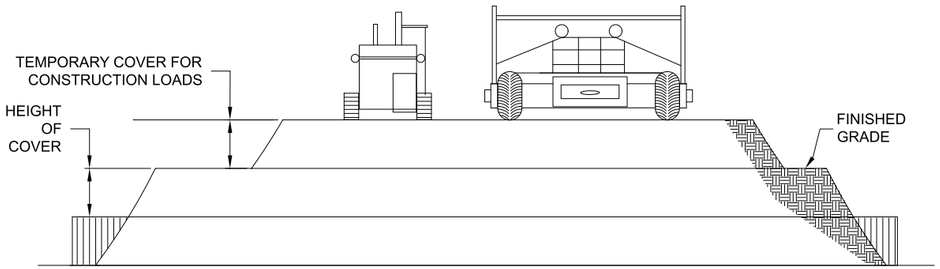


CONSTRUCTION LOADS

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)			
	18-50	50-75	75-110	110-150
	MINIMUM COVER (FT)			
12-42	2.0	2.5	3.0	3.0
48-72	3.0	3.0	3.5	4.0
78-120	3.0	3.5	4.0	4.0
126-144	3.5	4.0	4.5	4.5

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

CONSTRUCTION LOADING DIAGRAM

SCALE: N.T.S.

SPECIFICATION FOR DESIGNED DETENTION SYSTEM:

SCOPE
THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE DESIGNED DETENTION SYSTEM DETAILED IN THE PROJECT PLANS.

MATERIAL
THE MATERIAL SHALL CONFORM TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-274 OR ASTM A-92.

THE GALVANIZED STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-218 OR ASTM A-929.

THE POLYMER COATED STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-246 OR ASTM A-742.

THE ALUMINUM COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-197 OR ASTM B-744.

CONSTRUCTION LOADS
CONSTRUCTION LOADS MAY BE HIGHER THAN FINAL LOADS. FOLLOW THE MANUFACTURER'S OR NCSPA GUIDELINES.

PIPE
THE PIPE SHALL BE MANUFACTURED IN ACCORDANCE TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2: AASHTO M-36 OR ASTM A-760

GALVANIZED: AASHTO M-36 OR ASTM A-760

POLYMER COATED: AASHTO M-245 OR ASTM A-762

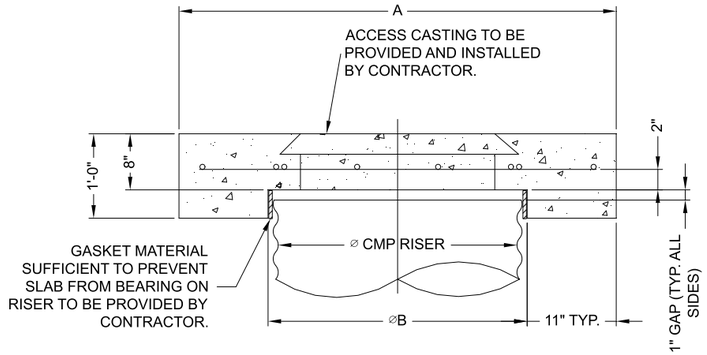
ALUMINUM: AASHTO M-196 OR ASTM B-745

HANDLING AND ASSEMBLY
SHALL BE IN ACCORDANCE WITH NCSP'S (NATIONAL CORRUGATED STEEL PIPE ASSOCIATION) FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL. SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR ALUMINUM PIPE.

INSTALLATION
SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II DIVISION II OR ASTM A-798 (FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL) OR ASTM B-788 (FOR ALUMINUM PIPE) AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

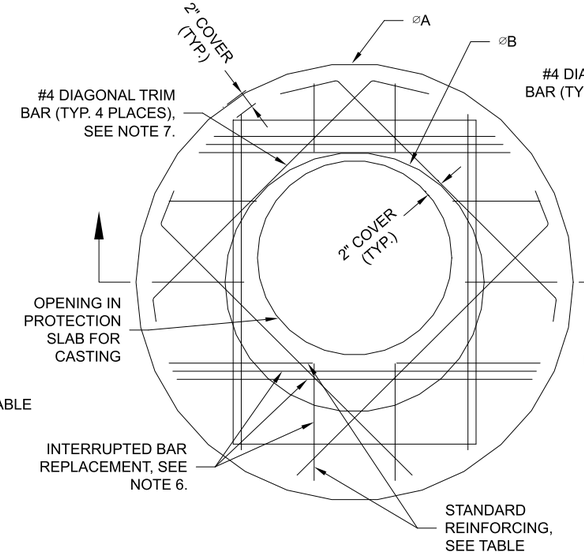
NOTE:
THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.



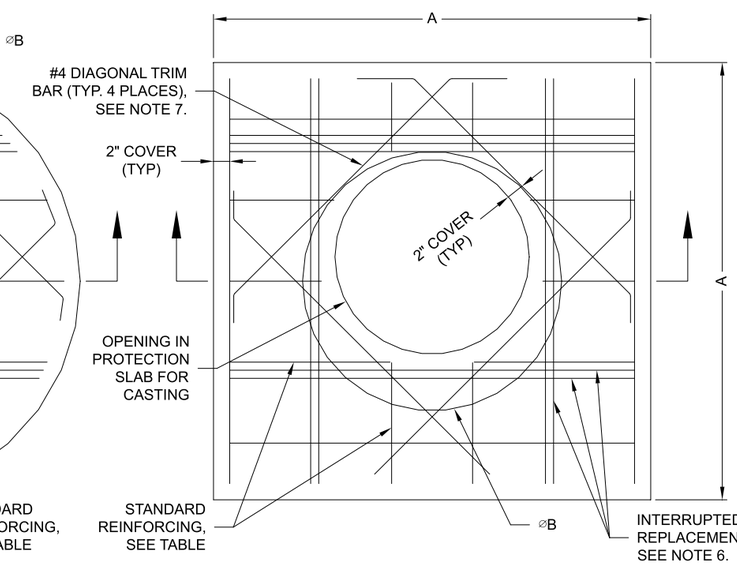
SECTION VIEW

REINFORCING TABLE				
⌀ CMP RISER	A	⌀ B	REINFORCING	**BEARING PRESSURE (PSF)
24"	⌀ 4' 4'X4'	26"	#5 @ 12" OCEW #5 @ 12" OCEW	2,410 1,780
30"	⌀ 4'-6" 4'-6" X 4'-6"	32"	#5 @ 12" OCEW #5 @ 12" OCEW	2,120 1,530
36"	⌀ 5' 5' X 5'	38"	#5 @ 10" OCEW #5 @ 10" OCEW	1,890 1,350
42"	⌀ 5'-6" 5'-6" X 5'-6"	44"	#5 @ 10" OCEW #5 @ 9" OCEW	1,720 1,210
48"	⌀ 6' 6' X 6'	50"	#5 @ 9" OCEW #5 @ 8" OCEW	1,600 1,100

** ASSUMED SOIL BEARING CAPACITY



ROUND OPTION PLAN VIEW



SQUARE OPTION PLAN VIEW

NOTES:

1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION.
2. DESIGN LOAD HS25.
3. EARTH COVER = 1' MAX.
4. CONCRETE STRENGTH = 3,500 psi
5. REINFORCING STEEL = ASTM A615, GRADE 60.
6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
9. DETAIL DESIGN BY DELTA ENGINEERING, BINGHAMTON, NY.

MANHOLE CAP DETAIL

SCALE: N.T.S.

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CONTECH CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO8449 RIALTO 2
DCV
Rialto, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
5269	8449	10/13/2021
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D3		

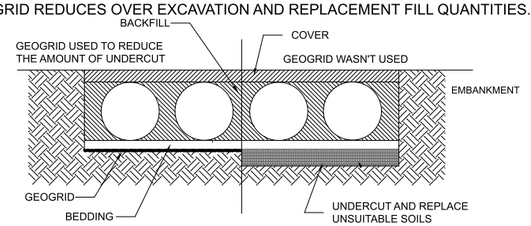
CMP DETENTION INSTALLATION GUIDE

PROPER INSTALLATION OF A FLEXIBLE UNDERGROUND DETENTION SYSTEM WILL ENSURE LONG-TERM PERFORMANCE. THE CONFIGURATION OF THESE SYSTEMS OFTEN REQUIRES SPECIAL CONSTRUCTION PRACTICES THAT DIFFER FROM CONVENTIONAL FLEXIBLE PIPE CONSTRUCTION. CONTECH ENGINEERED SOLUTIONS STRONGLY SUGGESTS SCHEDULING A PRE-CONSTRUCTION MEETING WITH YOUR LOCAL SALES ENGINEER TO DETERMINE IF ADDITIONAL MEASURES, NOT COVERED IN THIS GUIDE, ARE APPROPRIATE FOR YOUR SITE.

FOUNDATION

CONSTRUCT A FOUNDATION THAT CAN SUPPORT THE DESIGN LOADING APPLIED BY THE PIPE AND ADJACENT BACKFILL WEIGHT AS WELL AS MAINTAIN ITS INTEGRITY DURING CONSTRUCTION.

IF SOFT OR UNSUITABLE SOILS ARE ENCOUNTERED, REMOVE THE POOR SOILS DOWN TO A SUITABLE DEPTH AND THEN BUILD UP TO THE APPROPRIATE ELEVATION WITH A COMPETENT BACKFILL MATERIAL. THE STRUCTURAL FILL MATERIAL GRADATION SHOULD NOT ALLOW THE MIGRATION OF FINES, WHICH CAN CAUSE SETTLEMENT OF THE DETENTION SYSTEM OR PAVEMENT ABOVE. IF THE STRUCTURAL FILL MATERIAL IS NOT COMPATIBLE WITH THE UNDERLYING SOILS AN ENGINEERING FABRIC SHOULD BE USED AS A SEPARATOR. IN SOME CASES, USING A STIFF REINFORCING GEOGRID REDUCES OVER EXCAVATION AND REPLACEMENT FILL QUANTITIES.

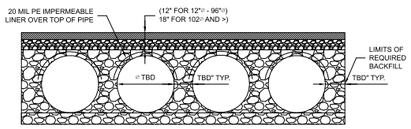


GRADE THE FOUNDATION SUBGRADE TO A UNIFORM OR SLIGHTLY SLOPING GRADE. IF THE SUBGRADE IS CLAY OR RELATIVELY NON-POROUS AND THE CONSTRUCTION SEQUENCE WILL LAST FOR AN EXTENDED PERIOD OF TIME, IT IS BEST TO SLOPE THE GRADE TO ONE END OF THE SYSTEM. THIS WILL ALLOW EXCESS WATER TO DRAIN QUICKLY, PREVENTING SATURATION OF THE SUBGRADE.

GEOMEMBRANE BARRIER

A SITE'S RESISTIVITY MAY CHANGE OVER TIME WHEN VARIOUS TYPES OF SALTING AGENTS ARE USED, SUCH AS ROAD SALTS FOR DEICING AGENTS. IF SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE, A GEOMEMBRANE BARRIER IS RECOMMENDED WITH THE SYSTEM. THE GEOMEMBRANE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM THE USE OF SUCH AGENTS INCLUDING PREMATURE CORROSION AND REDUCED ACTUAL SERVICE LIFE.

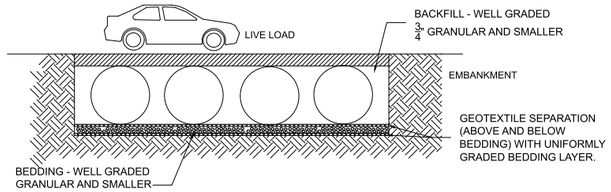
THE PROJECT'S ENGINEER OF RECORD IS TO EVALUATE WHETHER SALTING AGENTS WILL BE USED ON OR NEAR THE PROJECT SITE, AND USE HIS/HER BEST JUDGEMENT TO DETERMINE IF ANY ADDITIONAL PROTECTIVE MEASURES ARE REQUIRED. BELOW IS A TYPICAL DETAIL SHOWING THE PLACEMENT OF A GEOMEMBRANE BARRIER FOR PROJECTS WHERE SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE.



IN-SITU TRENCH WALL

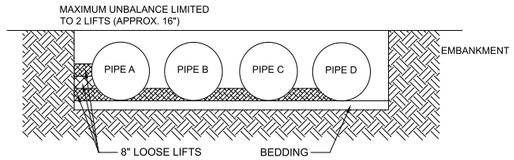
IF EXCAVATION IS REQUIRED, THE TRENCH WALL NEEDS TO BE CAPABLE OF SUPPORTING THE LOAD THAT THE PIPE SHEDS AS THE SYSTEM IS LOADED. IF SOILS ARE NOT CAPABLE OF SUPPORTING THESE LOADS, THE PIPE CAN DEFLECT. PERFORM A SIMPLE SOIL PRESSURE CHECK USING THE APPLIED LOADS TO DETERMINE THE LIMITS OF EXCAVATION BEYOND THE SPRING LINE OF THE OUTER MOST PIPES.

IN MOST CASES THE REQUIREMENTS FOR A SAFE WORK ENVIRONMENT AND PROPER BACKFILL PLACEMENT AND COMPACTION TAKE CARE OF THIS CONCERN.



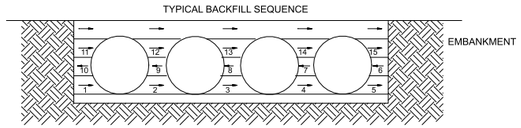
BACKFILL PLACEMENT

MATERIAL SHALL BE WORKED INTO THE PIPE HAUNCHES BY MEANS OF SHOVEL-SLICING, RODDING, AIR TAMPER, VIBRATORY ROD, OR OTHER EFFECTIVE METHODS.

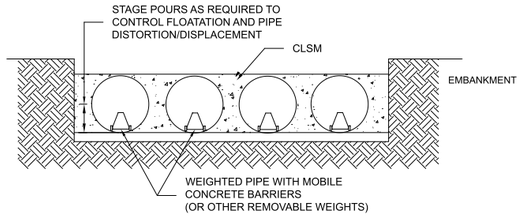


IF AASHTO T99 PROCEDURES ARE DETERMINED INFEASIBLE BY THE GEOTECHNICAL ENGINEER OF RECORD, COMPACTION IS CONSIDERED ADEQUATE WHEN NO FURTHER YIELDING OF THE MATERIAL IS OBSERVED UNDER THE COMPACTOR, OR UNDER FOOT, AND THE GEOTECHNICAL ENGINEER OF RECORD (OR REPRESENTATIVE THEREOF) IS SATISFIED WITH THE LEVEL OF COMPACTION.

FOR LARGE SYSTEMS, CONVEYOR SYSTEMS, BACKHOES WITH LONG REACHES OR DRAGLINES WITH STONE BUCKETS MAY BE USED TO PLACE BACKFILL. ONCE MINIMUM COVER FOR CONSTRUCTION LOADING ACROSS THE ENTIRE WIDTH OF THE SYSTEM IS REACHED, ADVANCE THE EQUIPMENT TO THE END OF THE RECENTLY PLACED FILL, AND BEGIN THE SEQUENCE AGAIN UNTIL THE SYSTEM IS COMPLETELY BACKFILLED. THIS TYPE OF CONSTRUCTION SEQUENCE PROVIDES ROOM FOR STOCKPILED BACKFILL DIRECTLY BEHIND THE BACKHOE, AS WELL AS THE MOVEMENT OF CONSTRUCTION TRAFFIC. MATERIAL STOCKPILES ON TOP OF THE BACKFILLED DETENTION SYSTEM SHOULD BE LIMITED TO 8- TO 10-FEET HIGH AND MUST PROVIDE BALANCED LOADING ACROSS ALL BARRELS. TO DETERMINE THE PROPER COVER OVER THE PIPES TO ALLOW THE MOVEMENT OF CONSTRUCTION EQUIPMENT SEE TABLE 1, OR CONTACT YOUR LOCAL CONTECH SALES ENGINEER.



WHEN FLOWABLE FILL IS USED, YOU MUST PREVENT PIPE FLOATATION. TYPICALLY, SMALL LIFTS ARE PLACED BETWEEN THE PIPES AND THEN ALLOWED TO SET-UP PRIOR TO THE PLACEMENT OF THE NEXT LIFT. THE ALLOWABLE THICKNESS OF THE CLSM LIFT IS A FUNCTION OF A PROPER BALANCE BETWEEN THE UPLIFT FORCE OF THE CLSM, THE OPPOSING WEIGHT OF THE PIPE, AND THE EFFECT OF OTHER RESTRAINING MEASURES. THE PIPE CAN CARRY LIMITED FLUID PRESSURE WITHOUT PIPE DISTORTION OR DISPLACEMENT, WHICH ALSO AFFECTS THE CLSM LIFT THICKNESS. YOUR LOCAL CONTECH SALES ENGINEER CAN HELP DETERMINE THE PROPER LIFT THICKNESS.

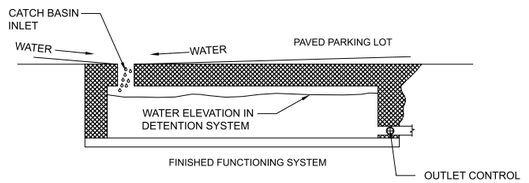


CONSTRUCTION LOADING

TYPICALLY, THE MINIMUM COVER SPECIFIED FOR A PROJECT ASSUMES H-20 LIVE LOAD. BECAUSE CONSTRUCTION LOADS OFTEN EXCEED DESIGN LIVE LOADS, INCREASED TEMPORARY MINIMUM COVER REQUIREMENTS ARE NECESSARY. SINCE CONSTRUCTION EQUIPMENT VARIES FROM JOB TO JOB, IT IS BEST TO ADDRESS EQUIPMENT SPECIFIC MINIMUM COVER REQUIREMENTS WITH YOUR LOCAL CONTECH SALES ENGINEER DURING YOUR PRE-CONSTRUCTION MEETING.

ADDITIONAL CONSIDERATIONS

BECAUSE MOST SYSTEMS ARE CONSTRUCTED BELOW-GRADE, RAINFALL CAN RAPIDLY FILL THE EXCAVATION; POTENTIALLY CAUSING FLOATATION AND MOVEMENT OF THE PREVIOUSLY PLACED PIPES. TO HELP MITIGATE POTENTIAL PROBLEMS, IT IS BEST TO START THE INSTALLATION AT THE DOWNSTREAM END WITH THE OUTLET ALREADY CONSTRUCTED TO ALLOW A ROUTE FOR THE WATER TO ESCAPE. TEMPORARY DIVERSION MEASURES MAY BE REQUIRED FOR HIGH FLOWS DUE TO THE RESTRICTED NATURE OF THE OUTLET PIPE.



CMP DETENTION SYSTEM INSPECTION AND MAINTENANCE

UNDERGROUND STORMWATER DETENTION AND INFILTRATION SYSTEMS MUST BE INSPECTED AND MAINTAINED AT REGULAR INTERVALS FOR PURPOSES OF PERFORMANCE AND LONGEVITY.

INSPECTION

INSPECTION IS THE KEY TO EFFECTIVE MAINTENANCE OF CMP DETENTION SYSTEMS AND IS EASILY PERFORMED. CONTECH RECOMMENDS ONGOING, ANNUAL INSPECTIONS. SITES WITH HIGH TRASH LOAD OR SMALL OUTLET CONTROL ORIFICES MAY NEED MORE FREQUENT INSPECTIONS. THE RATE AT WHICH THE SYSTEM COLLECTS POLLUTANTS WILL DEPEND MORE ON SITE SPECIFIC ACTIVITIES RATHER THAN THE SIZE OR CONFIGURATION OF THE SYSTEM.

INSPECTIONS SHOULD BE PERFORMED MORE OFTEN IN EQUIPMENT WASHDOWN AREAS, IN CLIMATES WHERE SANDING AND/OR SALTING OPERATIONS TAKE PLACE, AND IN OTHER VARIOUS INSTANCES IN WHICH ONE WOULD EXPECT HIGHER ACCUMULATIONS OF SEDIMENT OR ABRASIVE/ CORROSIVE CONDITIONS. A RECORD OF EACH INSPECTION IS TO BE MAINTAINED FOR THE LIFE OF THE SYSTEM

MAINTENANCE

CMP DETENTION SYSTEMS SHOULD BE CLEANED WHEN AN INSPECTION REVEALS ACCUMULATED SEDIMENT OR TRASH IS CLOGGING THE DISCHARGE ORIFICE.

ACCUMULATED SEDIMENT AND TRASH CAN TYPICALLY BE EVACUATED THROUGH THE MANHOLE OVER THE OUTLET ORIFICE. IF MAINTENANCE IS NOT PERFORMED AS RECOMMENDED, SEDIMENT AND TRASH MAY ACCUMULATE IN FRONT OF THE OUTLET ORIFICE. MANHOLE COVERS SHOULD BE SECURELY SEATED FOLLOWING CLEANING ACTIVITIES. CONTECH SUGGESTS THAT ALL SYSTEMS BE DESIGNED WITH AN ACCESS/INSPECTION MANHOLE SITUATED AT OR NEAR THE INLET AND THE OUTLET ORIFICE. SHOULD IT BE NECESSARY TO GET INSIDE THE SYSTEM TO PERFORM MAINTENANCE ACTIVITIES, ALL APPROPRIATE PRECAUTIONS REGARDING CONFINED SPACE ENTRY AND OSHA REGULATIONS SHOULD BE FOLLOWED.

ANNUAL INSPECTIONS ARE BEST PRACTICE FOR ALL UNDERGROUND SYSTEMS. DURING THIS INSPECTION, IF EVIDENCE OF SALTING/DE-ICING AGENTS IS OBSERVED WITHIN THE SYSTEM, IT IS BEST PRACTICE FOR THE SYSTEM TO BE RINSED, INCLUDING ABOVE THE SPRING LINE SOON AFTER THE SPRING THAW AS PART OF THE MAINTENANCE PROGRAM FOR THE SYSTEM.

MAINTAINING AN UNDERGROUND DETENTION OR INFILTRATION SYSTEM IS EASIEST WHEN THERE IS NO FLOW ENTERING THE SYSTEM. FOR THIS REASON, IT IS A GOOD IDEA TO SCHEDULE THE CLEANOUT DURING DRY WEATHER.

THE FOREGOING INSPECTION AND MAINTENANCE EFFORTS HELP ENSURE UNDERGROUND PIPE SYSTEMS USED FOR STORMWATER STORAGE CONTINUE TO FUNCTION AS INTENDED BY IDENTIFYING RECOMMENDED REGULAR INSPECTION AND MAINTENANCE PRACTICES. INSPECTION AND MAINTENANCE RELATED TO THE STRUCTURAL INTEGRITY OF THE PIPE OR THE SOUNDNESS OF PIPE JOINT CONNECTIONS IS BEYOND THE SCOPE OF THIS GUIDE.

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CONTECH CMP DETENTION SYSTEMS

CONTECH **DYODS** DRAWING

DYO8449 RIALTO 2
DCV
Rialto, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
5269	8449	10/13/2021
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D4		

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Section 6.3

Attachment E

- Stormwater BMP Maintenance Agreement
- Exhibit A: Legal Description
- Exhibit B: Vicinity Map
- Exhibit C: LID & BMPs Maintenance Schedule
- Exhibit D: Post-Development BMPs/WQMP

RECORDING REQUESTED BY
AND WHEN RECORDED MAIL TO:

Moises Peralta
Assistant Engineer
City of Rialto
335 W. Rialto Avenue
Rialto, CA 92376

SPACE ABOVE THIS LINE FOR RECORDERS USE

WATER QUALITY MANAGEMENT PLAN AND STORM WATER BMP TRANSFER, ACCESS AND MAINTENANCE AGREEMENT

CITY OF RIALTO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA

This Agreement is made this _____ day of _____, ____, by and _____ and the City of Rialto, a municipal corporation ("City"). The Owner and the City are sometimes each individually referred to herein as a "Party" and, collectively, as the "Parties"

RECITALS

WHEREAS, the 1987 amendments to the Clean Water Act ("CWA") added new Section 402(p) to the CWA establishing a framework for regulating municipal, industrial, and construction storm water discharges under the National Pollutant Discharge Elimination System ("NPDES") Permit; and

WHEREAS, Section 402(p) of the CWA requires NPDES permits for storm water discharges from Municipal Separate Sewer Systems (MS4), as well as other designated storm water discharges that are considered significant contributors of pollutants to waters of the United States; and

WHEREAS, the City is a co-permittee under the "Waste Discharge Requirements for the County of San Bernardino and the Incorporated Cities of San Bernardino County, Order No. R8-2010-0036, NPDES NO> CAS618036, Areawide Urban Storm Water Runoff" dated January 29, 2010 and issued by the California Regional Water Quality Control Board – Santa Ana Region, (the "NPDES Permit"); and

WHEREAS, among other things, the NPDES Permit requires the City to review and approve a Water Quality Management Plan ("WQMP") developed using the appropriate and Regional Board approved WQMP template for each new development project; and to require the preparation and implementation of an Operation and Maintenance Plan to ensure the long-term maintenance and operation of all structural and non-structural Best Management Practices ("BMPs") incorporated in each WQMP; and

WHEREAS, to comply with its obligations under the NPDES Permit with respect to new development projects the City enacted Section 12.60.260 of the Rialto Municipal Code vesting the City Engineer or designee with the authority to review and approve a WQMP for all new development projects and further requiring that the Owner of each project and the City to enter into a recordable

"Water Quality Management Plan" Agreement to ensure the long term maintenance and operations of structural and non-structural BMPs in each WQMP; and

WHEREAS, the Owner is the legal property owner of the real property situated in the State of California, County of San Bernardino, County of San Bernardino, located at _____ _____in the City of Rialto, more commonly identified by San Bernardino County Assessor's Parcel No. _____ and more particularly and legally described in "Exhibit A," and shown on "Exhibit B," (the "Property") as _____ attached hereto and incorporated herein by reference.

WHEREAS, at the time of initial approval of the development project known as _____ _____within the Property described herein, (the "Project"), the City required the Project to employ BMPs to minimize pollutants in urban storm water runoff in accordance with section 12.60.260 of the Rialto Municipal Code and NPDES Permit; and

WHEREAS, in order to minimize pollutants in urban storm water runoff and to minimize other adverse impacts of urban storm water runoff, the Owner has chosen to install and/or implement BMPs as described in the WQMP for the Project, on file with the City, a copy of which is on file with the City Engineer, and is incorporated herein by reference; and

WHEREAS, said WQMP for the Project has been certified by the Owner and reviewed and approved by the City; and

WHEREAS, said BMPs specified in the approved WQMP for the Project have been installed according to the approved WQMP plans and are functional as intended, and have been certified by Owner's Engineer of Record and the Owner; and

WHEREAS, said BMPs, with installation and/or implementation on private property and draining only private property, are part of a private facility with all maintenance or replacement therefore, the sole responsibility of the Owner in accordance with the terms of this Agreement; and

WHEREAS, the Owner is aware that periodic and continuous maintenance, including, but not necessarily limited to, filter material replacement and sediment removal, is required to assure proper performance of all BMPs in the WQMP for the Project, and that, furthermore, such maintenance activity will require compliance with all Federal, State, and local laws and regulations, including those pertaining to confined space and waste disposal methods, in effect at the time such maintenance occurs.

NOW THEREFORE, in consideration of the City's approval of the Project and the mutual promises contained herein, the City of Rialto and _____ hereby agrees as follows:

1. The Owner hereby provides the City or the City's designee complete access, of any duration, to the BMPs and their immediate vicinity (a) at any time, upon reasonable notice; or (b) in the event of emergency , as determined by City Engineer or designee with no advance notice; for the purpose of inspection, sampling, testing of the BMPs, and in case of emergency , to undertake all necessary repairs or other preventative measures at Owner's expense as provided for in Section 3, below. The City shall make every effort at all times to minimize or avoid interference with Owner's use of the Property when undertaking such inspections and repairs.

2. The Owner shall use its best efforts diligently to inspect each and every BMP installed within the Project once each calendar year prior to October 1st, to document said inspections in writing with any supporting data or materials, to maintain a record of said inspections on site at all times, and to maintain all BMPs in a manner assuring peak performance at all times. All reasonable precautions shall be exercised by the Owner and the Owner's representative or contractor in the removal and extraction of any material(s) from the BMPs, and the ultimate disposal of the material(s) in manner consistent with all relevant laws and regulations in effect at the time. As may be requested from time to time by the City, the Owner shall provide the City with documentation identifying the materials(s) removed, the quantity, and the location of disposal destination, as appropriate.

3. In the event the Owner, or its successors or assigns, fails to accomplish the necessary maintenance contemplated by this Agreement, within thirty (30) days of being given written notice by the City to do so, setting forth with specificity the actions to be taken, the City is authorized to cause any maintenance necessary to be done and charge the entire cost and expense to the Owner or the Owner's successors or assigns, including administrative costs, attorneys fees and interest thereon at the maximum rate authorized by the law, twenty (20) days after the Owner's receipt of the notice of expense until paid in full.

4. The City may require the Owner to post security in a form and for a time period satisfactory to the City to guarantee the performance of the obligations stated herein. Should the Owner fail to perform the obligations under this Agreement, the City may, in the case of a cash bond, act for the Owner using the cash proceeds, or in the case of a surety bond, require the sureties to perform the obligations of this Agreement. As an additional remedy, the City Engineer may reasonably withdraw any previous storm water-related approval with respect to the Property on which BMPs have been improperly installed, modified without permission of the City and/or inadequately implemented and maintained until such time as the Owner repays to the City its reasonable costs incurred in accordance with paragraph 3 above.

5. This Agreement affects County of San Bernardino Assessor's Parcel Nos. _____ _____, and shall be recorded in the Official Records of the County of San Bernardino County at the expense of the Owner and shall constitute notice to all successors and assigns of the title to said Property of the obligation herein set forth. This agreement shall also entitle the City to record a lien against the Property in such amount as will fully reimburse the City, including interest as herein above set forth, subject to foreclosure in event of default in payment.

6. In event any action is commenced to enforce or interpret any of the terms or conditions of this agreement the prevailing Party shall, in addition to any costs and other relief, be entitled to the recovery of its reasonable attorney's fees, including fees for the use of in-house counsel by a Party.

7. It is the intent of the Parties that the burdens and benefits herein undertaken shall constitute equitable servitudes that run with the Property and shall be binding upon future Owners of all or any portion of the Property. Any Owner's liability hereunder shall terminate

at the time it ceases to be an Owner of the encumbered Property, except for obligations which accrue prior to the date of transfer by such Owner, which shall remain the personal obligation of such Owner.

8. The obligations herein undertaken shall be binding upon the heirs, successors, executors, administrators and assigns of the parties hereto. The term "Owner" shall include not only the present Owner, but also heirs, successors, executors, administrators, and assigns. The Owner shall notify any successor to title of all or part of the Property about the existence of this Agreement. The Owner shall provide a copy of such notice to the City at the same time such notice is provided to the successor.

9. Time is of essence in the performance of this Agreement.

10. Any notice to the Party required or called for in this Agreement shall be in writing and shall be served in person, or by deposit in the U.S. Mail, first class postage prepaid, to the address set forth below. Notice(s) shall be deemed effective upon receipt, or seventy-two (72) hours after deposit in the U.S. Mail, whichever is earlier. A Party may change a notice address only by providing written notice thereof to the other Party.

CITY	OWNER
Public Works Director/City Engineer	_____
City of Rialto	_____
335 W. Rialto Avenue	_____
Rialto, CA 92376	_____

11. This Agreement shall be governed by and constructed in accordance with the laws of the State of California.

12. Any amendment to this Agreement shall be in writing and approved by the City Engineer and the Owner.

IN WITNESS WHEREOF, the Parties hereto have affixed their signatures as the date first written above.

CITY OF RIALTO

By: _____	By: _____
Robert G. Eisenbeisz, P.E.	Name: _____
Director of Public Works/City Engineer	Title: _____

LEGAL DESCRIPTION:

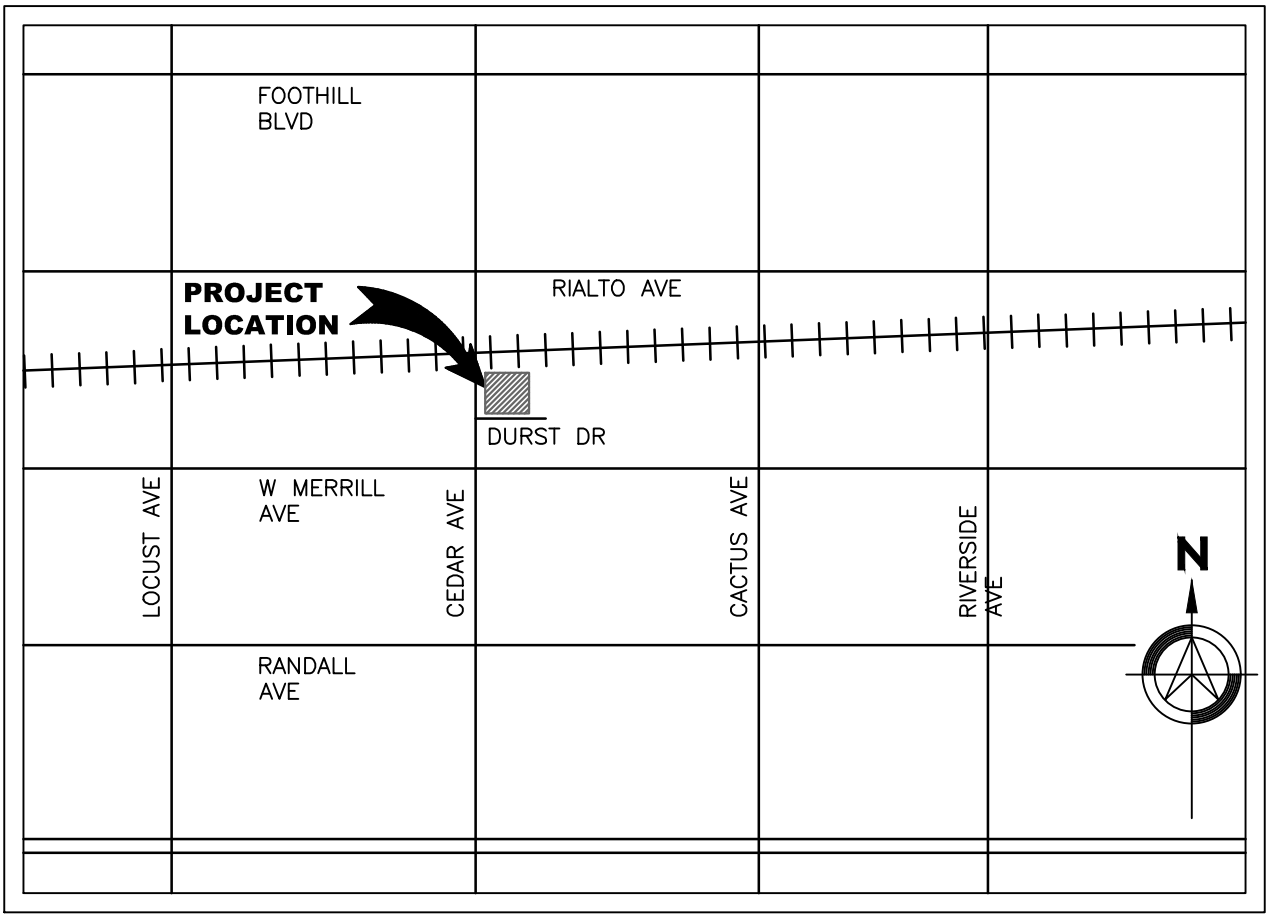
THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF RIALTO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCELS 3, 4 AND 5 OF PARCEL MAP NO. 12885, IN THE CITY OF RIALTO, COUNTY OF SAN BERNARDINO AS PER MAP RECORDED IN BOOK 150 PAGE(S) 70 & 71 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

FOR CONVEYANCING PURPOSES ONLY: APN 0128-062-25-0-000 (AFFECTS PARCEL 3)

APN: 0128-062-26-0-000 (AFFECTS PARCEL 4)

APN: 0128-062-27-0-000 (AFFECTS PARCEL 5)



VICINITY MAP

N.T.S.

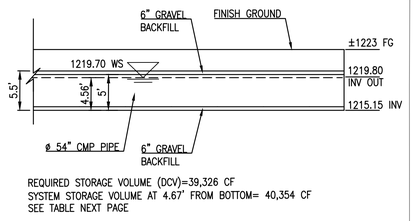
EXHIBIT C
(LIST Of BMP MAINTENANCE ITEMS)

BMP Description	Description of Maintenance Procedures	Minimum Inspection/ Maintenance Frequency	Maintenance Responsible Party
Catch Basin/ Filter Insert	Inspect for illegal dumping and /or debris accumulation. Clean filters whenever 25% of filter capacity is exceeded by debris accumulation	Inspect minimum 2 times per year and after every major storm event	By owner & future owner
Underground CMP Detention/Infiltration Systerm	Inspect the underground CMP via the access manhole, for accumulated sediment and debris levels and cleanout solids when > 6" build up occurs. Inspect for standing water within 48 hours of heavy rain events to ensure proper drawdown. Clean and flush underground systems to restore free drainage.	Annually, and after heavy rains	By owner & future owner
Landscape Areas	Implement - Mowing, Trimming, Pruning practices to prevent discharges of landscape waste into on-site retention structures. Control fertilizer, herbicide & pesticide applications to prevent stormwater contamination	Weekly	By owner & future owner
Signage & Stencil	ean the stencil/signage surface to remove any excess dirt. Re-paint if necessary.	Weekly	By owner & future owner
Trash Cans	Empty trash receptacles. Clean the areas around Cans by sweeping .	Weekly	By owner & future owner

CITY OF RIALTO
HYDROLOGY EXHIBIT
CEDAR AVENUE AND DURST DRIVE
POST-DEVELOPED CONDITION

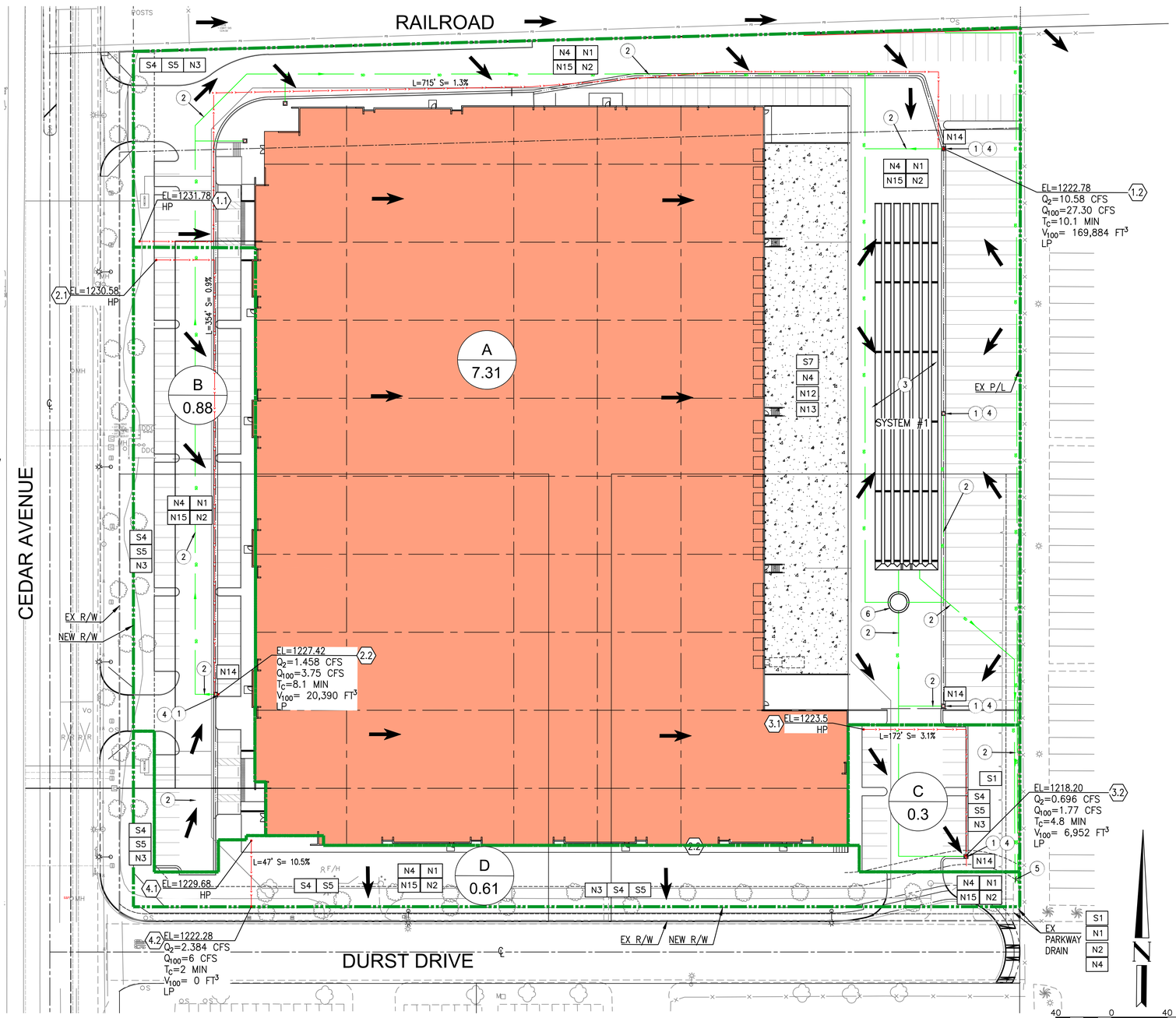
SOURCE CONTROL BMPs

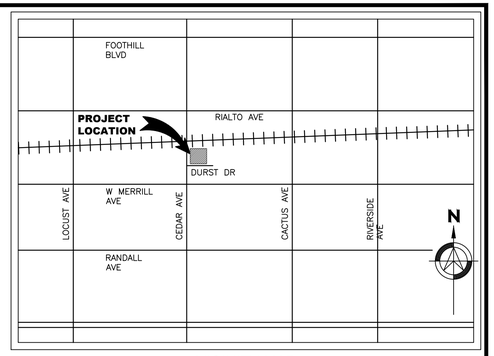
S1	STORM DRAIN STENCILING
S4	EFFICIENT IRRIGATION SYSTEM
S5	DEPRESSED LANDSCAPE AREA
S7	LOADING DECK AREA
N1	EDUCATION OF PROPERTY OWNER
N2	ACTIVITY RESTRICTIONS
N3	LANDSCAPE AREAS
N4	BMP MAINTENANCE
N12	EMPLOYEE TRAINING
N13	HOUSEKEEPING OF LOADING DOCKS
N14	CATCH BASIN INSPECTIONS
N15	VACUUM SWEEPING OF PAVED AREAS



REQUIRED STORAGE VOLUME (DCV)=39,326 CF
SYSTEM STORAGE VOLUME AT 4.67' FROM BOTTOM= 40,354 CF
SEE TABLE NEXT PAGE

WATER SURFACE ELEVATION DETAIL
N.T.S.





VICINITY MAP
N.T.S.

LEGEND:

- DRAINAGE AREA BOUNDARY
- LONGEST WATERCOURSE
- PROPOSED FLOW DIRECTION ARROW
- A / X-XXX — DRAINAGE SUB AREA DESIGNATION / AREA (AC)
- # — NODE #
- HP, LP — HIGH POINT, LOW POINT
- X% — LONGEST DRAINAGE WATERCOURSE SLOPE
- X' — LONGEST DRAINAGE WATERCOURSE
- BUILDING
- UNDERGROUND INFILTRATION SYSTEM

HYDROLOGY INFORMATION

SITE AREA:	9.38 ACRE	
SOIL GROUP:	A	(PER SBC SOIL GROUP MAP FIG. C-15)
IMPERVIOUS:	13% (PER CALCULATIONS)	
ISOHYETALS	1.46"	(100-YEAR 1 HOUR)
	0.586"	(2-YEAR 1 HOUR)
CN NUMBER:	89	(SOIL GROUP A)
FREQUENCY:	100 YEAR	(FOR STORM DARIN DESIGN)
	2 YEAR	(FOR STORMWATER QUALITY)
METHOD:	SAN BERNARDINO COUNTY HYDROLOGY MANUAL	

DRAINAGE NOTES:

1. PROPOSED CATCH BASIN WITH FILTER INSERT
2. PROPOSED STORM DRAIN PIPE PRIVATE MAINTAINED
3. PROP. LID DEVICE- CMP UNDERGROUND INFILTRATION SYSTEM
4. PROPOSED CATCH BASIN STENSIL
5. PROPOSED CONCRETE CHANNEL
6. PROPOSED CDS HYDRODYNAMIC SEPARATOR

NOTE:
1. ALL ON-SITE STORM DRAINS ARE PRIVATE STORM DRAIN SYSTEMS, NOT TO BE MAINTAINED BY THE CITY OF ONTARIO.
2. ALL ON-SITE BMP'S & UNDERGROUND INFILTRATION SYSTEMS TO BE MAINTAINED BY OWNER
3. CONTRACTOR SHALL VERIFY INFILTRATION RATES WITH SOILS ENGINEERS AFTER GRADING OPERATIONS AND PRIOR TO INSTALLATION OF UNDERGROUND INFILTRATION SYSTEM.

	BMPs / Detention Summary							
Drainage Area No.	Drainage Sub-Area	Tributary Area (AC)	Imprevious Ratio	2-YR Storm (CFS)	P6	CBMP	Required Design Capture Volume (CF)	Provided CMP infitration system (CF)
DA1 DMA	A	7.31	0.98	10.58	0.87	0.70	39,326	45,098
	B	0.88	0.73	1.458				
	C	0.30	0.62	0.696				
	D	0.61	0.03	2.384				

PREPARED BY:
WestLAND Group, Inc. Land Surveyors • Civil Engineers • GIS
4150 CONCOURS, ONTARIO, CA 91764
PHONE: (909) 989-9789 FAX: (909) 989-9660
JOB NO: 2018-131

CEDAR AVENUE AND DURST DRIVE
POST-DEVELOPED EXHIBIT

CITY OF RIALTO

DATE: JUN 2021
SHEET 2 OF 2

Drawing Name: P:\Year_2021\2021-100 1230 W Durst Rialto - Block Creek Group\06 Engineering\LD\Reports\WQMP\3_Exhibits\2021-100_POST - Prelim.dwg Last Opened: Oct 25, 2021 - 2:32pm by: rhame.sawris

CONTECH ENGINEERED SOLUTIONS

Date: 10/13/2021
Project Name: DCV - 8449 (10-13-2021 21-55-55)

City / County:
State:

Designed By:
Company:
Telephone:

CMP: Underground Detention System
Storage Volume Estimation

=Adjustable Input Cells

Contech Engineered Solutions, LLC is pleased to offer the following estimate of storage volume for the above named project. The results are submitted as an estimate only, without liability on the part of Contech Engineered Solutions, LLC for accuracy or suitability to any particular applicaton and are subject to verification of the Engineer of Record. **This tool is only applicable for rectangular shaped systems.**

Summary of Inputs

System Information		Backfill Information		Pipe & Analysis Information	
Out-to-out length (ft):	263.0	Backfill Porosity (%):	40%	System Diameter (in):	54
Out-to-out width (ft):	45.0	Depth Above Pipe (in):	6.0	Pipe Spacing (in):	27
Number of Manifolds (ea):	1.0	Depth Below Pipe (in):	6.0	Incremental Analysis (in):	2
Number of Barrels (ea):	7.0	Width At Ends (ft):	1.0	System Invert (Elevation):	1215.15
		Width At Sides (ft):	1.0		

Storage Volume Estimation

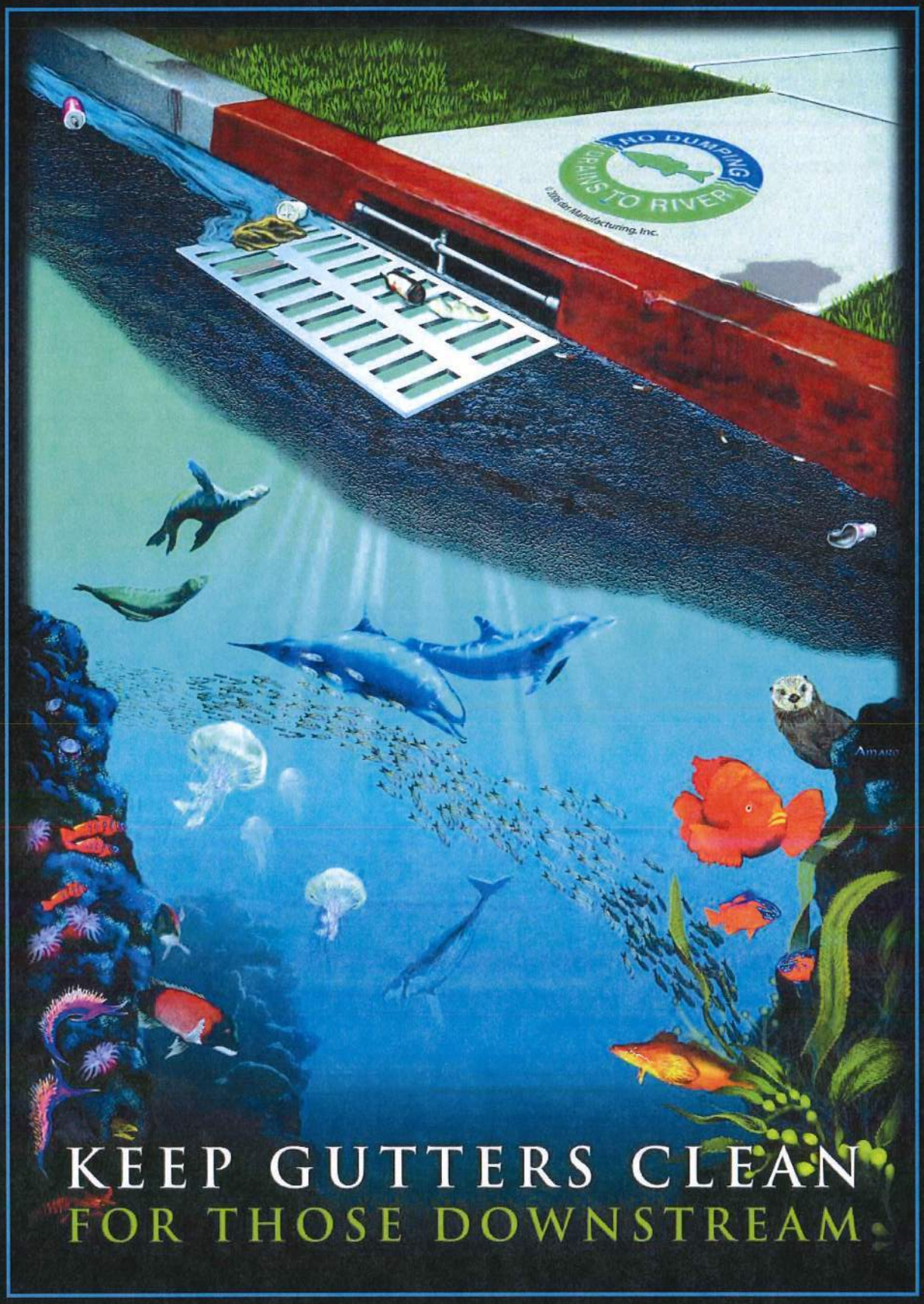
System		Pipe		Stone		Total System		Miscellaneous	
Depth (ft)	Elevation (ft)	Incremental Storage (cf)	Cumulative Storage (cf)	Incremental Storage (cf)	Cumulative Storage (cf)	Incremental Storage (cf)	Cumulative Storage (cf)	Percent Open Storage (%)	Ave. Surface Area (sf)
0.00	1215.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	4,982.0
0.17	1215.31	0.0	0.0	830.3	830.3	830.3	830.3	0.0%	4,982.0
0.33	1215.48	0.0	0.0	830.3	1,660.7	830.3	1,660.7	0.0%	4,982.0
0.50	1215.65	0.0	0.0	830.3	2,491.0	830.3	2,491.0	0.0%	4,982.0
0.67	1215.81	352.9	352.9	689.2	3,180.2	1,042.1	3,533.1	10.0%	6,873.2
0.83	1215.98	633.8	986.7	576.8	3,757.0	1,210.6	4,743.7	20.8%	7,604.7
1.00	1216.15	804.7	1,791.4	508.5	4,265.4	1,313.1	6,056.8	29.6%	8,129.2
1.17	1216.31	933.3	2,724.7	457.0	4,722.4	1,390.3	7,447.2	36.6%	8,539.5
1.33	1216.48	1,035.9	3,760.7	416.0	5,138.4	1,451.9	8,899.1	42.3%	8,872.0
1.50	1216.65	1,119.7	4,880.4	382.4	5,520.8	1,502.2	10,401.2	46.9%	9,145.3
1.67	1216.81	1,188.8	6,069.2	354.8	5,875.7	1,543.6	11,944.8	50.8%	9,370.5
1.83	1216.98	1,245.5	7,314.7	332.1	6,207.8	1,577.6	13,522.5	54.1%	9,554.8
2.00	1217.15	1,291.6	8,606.3	313.7	6,521.5	1,605.3	15,127.8	56.9%	9,702.8
2.17	1217.31	1,328.1	9,934.3	299.1	6,820.6	1,627.2	16,754.9	59.3%	9,817.9
2.33	1217.48	1,355.8	11,290.1	288.0	7,108.6	1,643.8	18,398.7	61.4%	9,902.5
2.50	1217.65	1,375.2	12,665.3	280.3	7,388.9	1,655.5	20,054.2	63.2%	9,958.1
2.67	1217.81	1,386.7	14,052.0	275.6	7,664.5	1,662.4	21,716.5	64.7%	9,985.7
2.83	1217.98	1,390.6	15,442.6	274.1	7,938.6	1,664.7	23,381.2	66.0%	9,985.7
3.00	1218.15	1,386.7	16,829.3	275.6	8,214.3	1,662.4	25,043.6	67.2%	9,958.1
3.17	1218.31	1,375.2	18,204.5	280.3	8,494.5	1,655.5	26,699.0	68.2%	9,902.5
3.33	1218.48	1,355.8	19,560.2	288.0	8,782.6	1,643.8	28,342.8	69.0%	9,817.9
3.50	1218.65	1,328.1	20,888.3	299.1	9,081.7	1,627.2	29,970.0	69.7%	9,702.8
3.67	1218.81	1,291.6	22,179.9	313.7	9,395.4	1,605.3	31,575.2	70.2%	9,554.8
3.83	1218.98	1,245.5	23,425.4	332.1	9,727.5	1,577.6	33,152.9	70.7%	9,370.5
4.00	1219.15	1,188.8	24,614.2	354.8	10,082.3	1,543.6	34,696.5	70.9%	9,145.3
4.17	1219.31	1,119.7	25,733.9	382.4	10,464.8	1,502.2	36,198.7	71.1%	8,872.0
4.33	1219.48	1,035.9	26,769.8	416.0	10,880.7	1,451.9	37,650.6	71.1%	8,539.5
4.50	1219.65	933.3	27,703.1	457.0	11,337.7	1,390.3	39,040.9	71.0%	8,129.2
4.67	1219.81	804.7	28,507.8	508.5	11,846.2	1,313.1	40,354.0	70.6%	7,604.7
4.83	1219.98	633.8	29,141.6	576.8	12,423.0	1,210.6	41,564.7	70.1%	6,873.2
5.00	1220.15	352.9	29,494.5	689.2	13,112.2	1,042.1	42,606.7	69.2%	4,982.0
5.17	1220.31	0.0	29,494.5	830.3	13,942.5	830.3	43,437.1	67.9%	4,982.0
5.33	1220.48	0.0	29,494.5	830.3	14,772.8	830.3	44,267.4	66.6%	4,982.0
5.50	1220.65	0.0	29,494.5	830.3	15,603.2	830.3	45,097.7	65.4%	4,982.0

These results are submitted to you as a guideline only, without liability on the part of CONTECH Engineered Solutions, LLC for accuracy or suitability to any particular application, and are subject to your verification.

Section 6.4

Attachment F

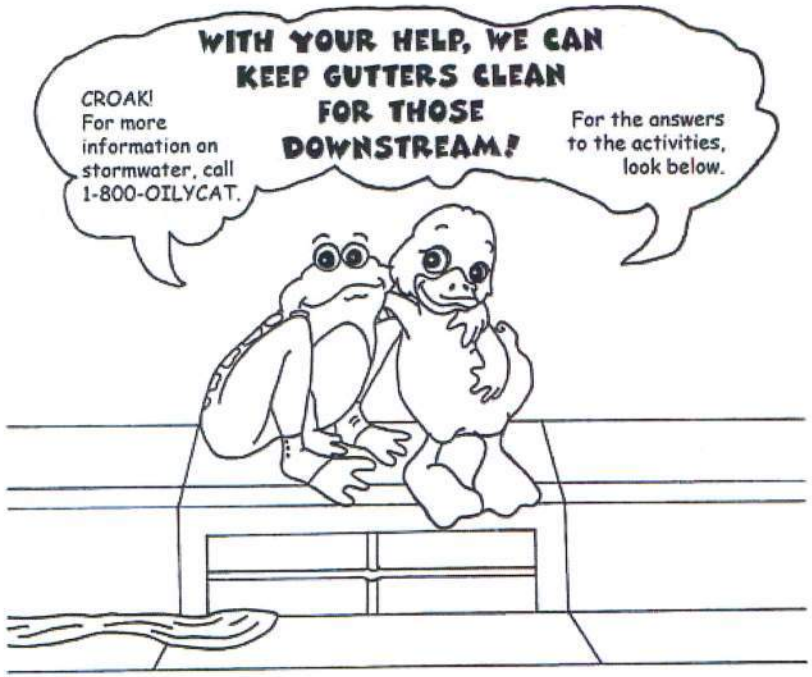
- Education Materials



KEEP GUTTERS CLEAN
FOR THOSE DOWNSTREAM

FOR MORE INFORMATION ON PREVENTING STORMWATER POLLUTION
CALL 1(800) CLEANUP OR VISIT WWW.SBCOUNTY.GOV/STORMWATER

The San Bernardino County Stormwater Program is a cooperative effort including the Flood Control District, the County of San Bernardino, and the cities of Big Bear Lake, Chino, Chino Hills, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland, and Yucaipa.



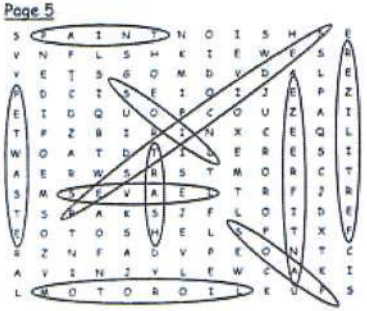
Page 2

Everyone lives in a watershed, so you should have listed all of the animals (people included!).

Page 3

The stormwater goes straight to the river, it does not go to the water treatment plant to be cleaned.

Page 5



PAINT
PETWASTE
PESTICIDES
SOIL
TRASH
LEAVES
MOTOROIL
SOAP
ANTIFREEZE
FERTILIZER

Page 6

1) Paint and other pollutants are left outside. 2) Rain water washes over the pollutants and carries them into the street. 3) Polluted rain water flows down the street and into the storm drain. 4) The storm drain carries the polluted stormwater to the stream. 5) Fish and other animals that live in the stream get sick and might die.

Page 7

Fish, Birds, People, Ducks, Frogs, Animals, You, Plants, Bugs, Everyone

Page 9

1) Sweep, 2) Pick up, 3) Prevent, 4) Recycle, 5) Wash, 6) Reduce Waste, 7) Tell

Page 10

Across: 1) Trash, 2) Recycle, 3) You, 4) Plastic

Down: 1) Hazardous, 2) Compost, 3) Lawn

STORMWATER
THE BOOK



RATED F.K.O. (For Kids Only!)

Brought to you by the San Bernardino County Stormwater Program, including the County of San Bernardino, San Bernardino County Flood Control and the cities of Big Bear, Chino, Chino Hills, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland, and Yucaipa.

Illustrations by McAllister Design and Melissa S. Badalian

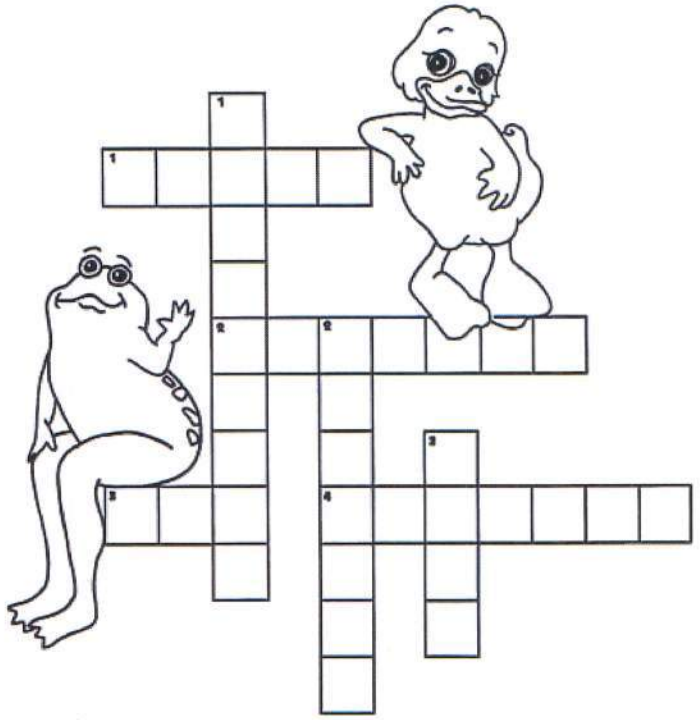
WHERE DOES ALL THE WATER GO?



Whenever it rains or snows, water runs off the land and into our storm drain system. The storm drain system is made up of gutters, storm drains (the holes in the curb) and pipes. The water that runs off the land is called stormwater. The storm drain system carries the stormwater to local waterways, including the Santa Ana River. The water that runs off into the storm drain system never passes through a water treatment plant, so anything the stormwater picks up, or is placed in it along the way, will be carried UNTREATED to the nearest waterway.

CLEAN WATER CROSSWORD

Decide what words belong in which boxes by reading the clues.



ACROSS

1. The place litter and pet waste belong.
2. What you should do with used motor oil and filters.
3. Who can help prevent stormwater pollution?
4. You can recycle _____ bottles.

DOWN

1. Left over paint, antifreeze and household cleaners are _____ wastes, and should be taken to a collection facility.
2. You can make it out of yard clippings.
3. Where, at home, you can wash the car without having soap, dirt and oil flowing to the storm drain.

LEND A HELPING HAND

To help prevent stormwater pollution, Stormy puts recyclables in the recycle bin and litter in the trash can.

Write the appropriate words from the recycle bin in the blanks to find out what else you can do to prevent pollution.



1. _____ the driveway instead of hosing debris into the street.

2. _____ pet waste and put it in the trash rather than leave it lying on the ground.

3. _____ run off, water the lawn for shorter periods of time.

4. Ask your parents to _____ used motor oil.

5. _____ the car on the lawn or at the car wash, so soap, dirt and oil don't end up in the storm drain.

6. _____ by composting yard debris, such as grass clippings, leaves and twigs, and use the compost in your garden.

7. _____ your parents that left over paint and antifreeze need to be taken to a household hazardous waste collection facility.

WHO LIVES IN A WATERSHED?

A watershed is the land that water flows across or under on its way to a stream, river, lake or ocean. Water runs to the lowest point in the watershed.

At the bottom of the page, list the animals in this picture that live in a watershed.



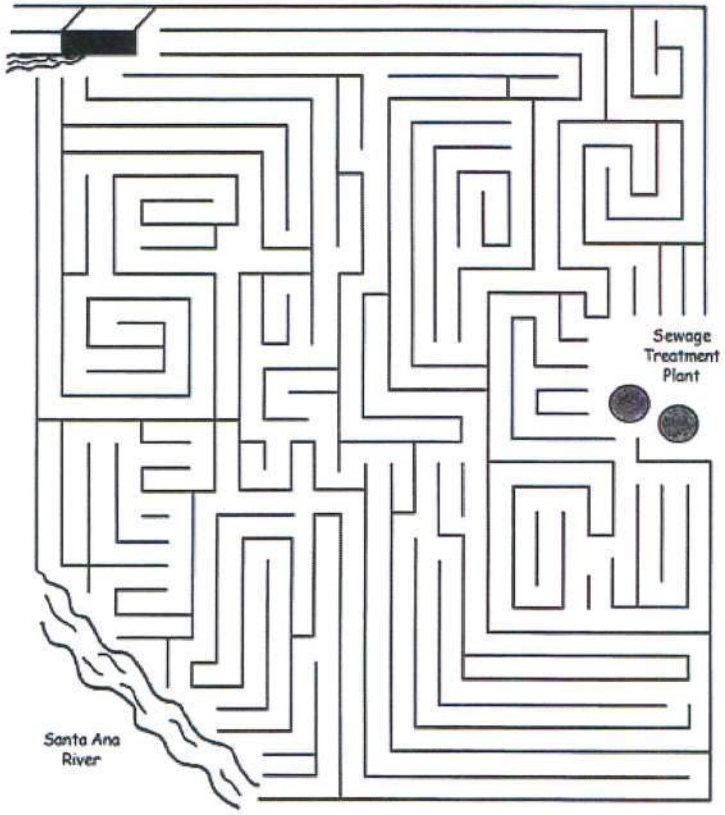
_____

_____

_____

THE A-MAZING STORMWATER STORY

Everyone knows that water flows. But who knows where the water goes? Follow the gutter water through the storm drain system to find out.



Does gutter water go to the sewage treatment plant or to the river?_____

HELPING TO KEEP GUTTERS CLEAN

There are lots of ways you can help prevent stormwater pollution and keep your water (and our home!) clean. You can help by: 1) placing litter in trash cans and recycling materials, such as aluminum, paper, and plastic bottles; 2) picking up pet waste and putting it in the trash; 3) washing the family car in an area that doesn't run off to a storm drain, such as your lawn or the car wash; 4) watering the lawn for shorter periods of time so the water doesn't run off; and, 5) rake or sweep up grass, leaves and twigs from your yard, rather than hosing it away or using a leaf blower. The plant material you collect can be used to make compost.

You can get your parents to help too! Tell them that things like paint, antifreeze and chemical cleaners need to be taken to a household hazardous waste collection facility. Also, ask them to repair any leaks their cars have and to recycle used motor oil and filters.



WATER POLLUTION AFFECTS...



Unscramble the words below to find out who is harmed by water pollution.

HIFS _____

SRBDI _____

LEEPOP _____

USKDC _____

GOFRS _____

LMNAISA _____

OYU _____

NLTAPS _____

GUSB _____

YREVNOEE _____



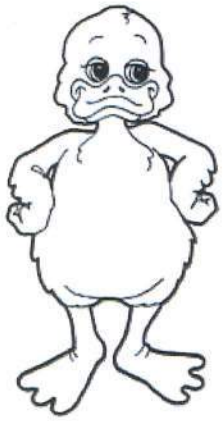
STORMWATER POLLUTION

The untreated water in the storm drain system can carry pollutants to nearby waterways. Things that are put on the ground can be washed into our storm drains by rain or overwatering our yards. When carried by stormwater, pollutants, such as motor oil and antifreeze from cars, fertilizers and pesticides on our lawns and gardens, pet waste, paint, trash, and soap can end up in the waterways, making the animals that live there very sick. Even things like soil and leaves can be pollutants--they clog storm drains and choke up our waterways. Sometimes, people who don't know that stormwater isn't treated, dump or deliberately wash pollutants directly into the storm drains. Of course, you, Croaker and Stormy know where all these pollutants go.



FIND THE POLLUTANTS

S	P	A	I	N	T	N	O	I	S	H	S	E
V	N	F	L	S	H	K	I	E	W	E	S	R
Y	E	T	S	G	O	M	D	V	D	A	L	E
P	D	C	I	S	E	I	O	I	J	E	P	Z
E	I	D	Q	U	O	P	C	O	U	Z	A	I
T	P	Z	B	I	R	I	N	X	C	E	Q	L
W	O	A	T	D	T	I	L	E	R	E	S	I
A	E	R	W	S	R	S	T	M	O	R	C	T
S	M	S	E	V	A	E	L	T	R	F	J	R
T	S	P	A	K	S	J	F	L	O	I	D	E
E	O	T	O	S	H	E	L	S	F	T	X	F
R	Z	N	F	A	D	V	P	E	O	N	T	C
A	V	I	N	J	Y	L	E	W	C	A	K	I
L	M	O	T	O	R	O	I	L	K	U	P	S



Stormy has found many pollutants in the stream in which he lives. All of these pollutants were carried to the stream in the stormwater and are mentioned on page 4. Can you find the stormwater pollutants in the box above? Some words may be backwards. When you find them, write the words in the spaces provided.

1) _____ 6) _____

2) _____ 7) _____

3) _____ 8) _____

4) _____ 9) _____

5) _____ 10) _____

FROM YOUR HOME TO OURS



Pollution in our neighborhoods can travel to local streams and rivers through the storm drain system. Below is a list of steps in this polluting process, but the steps are out of order. Write out the steps on the lines provided in the order that they would normally occur, with number one being the first step and number five being the last step.



The storm drain carries the polluted stormwater to the stream.



1. _____

Paint and other pollutants are left outside.



2. _____

Fish and other animals that live in the stream get sick and might die.



3. _____

Rain water washes over the pollutants and carries them into the street.

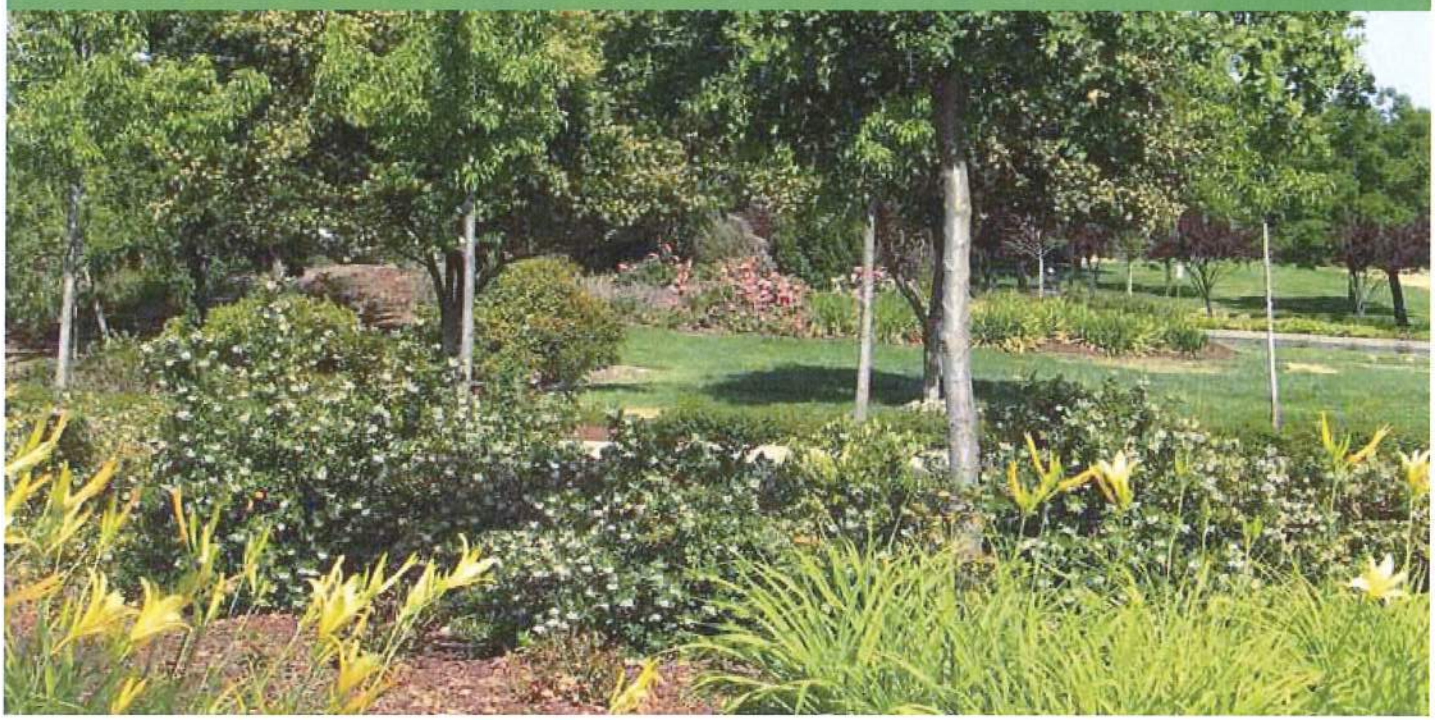


4. _____

Polluted rain water flows down the street and into the storm drain.



5. _____



The Updated Model Water Efficient Landscape Ordinance

CALIFORNIA DEPARTMENT OF WATER RESOURCES

Landscapes are essential to the quality of life in California. They provide areas for recreation, enhance the environment, clean the air and water, prevent erosion, offer fire protection and replace ecosystems lost to development.

California's economic prosperity and environmental quality are dependant on an adequate supply of water for beneficial uses. In California, about half of the urban water used is for landscape irrigation. Ensuring **efficient landscapes** in new developments and reducing water waste in existing landscapes are the most cost-effective ways to stretch our limited water supplies and ensure that we continue to have sufficient water for California to prosper.





The Water Conservation in Landscaping Act of 2006 (Assembly Bill 1881, Laird) requires cities, counties, and charter cities and charter counties, to adopt landscape water conservation ordinances by January 1, 2010. Pursuant to this law, the Department of Water Resources (DWR) has prepared a Model Water Efficient Landscape Ordinance (Model Ordinance) for use by local agencies. The Model Ordinance was approved by the Office of Administrative Law on September 10, 2009. The Model Ordinance became effective on September 10.

All local agencies must adopt a water efficient landscape ordinance by **January 1, 2010**. The local agencies may adopt the state Model Ordinance, or craft an ordinance to fit local conditions. In addition, several local agencies may collaborate and craft a region-wide ordinance. In any case, the adopted ordinance must be as effective as the Model Ordinance in regard to water conservation.

For more information, please visit our web site at
http://www.water.ca.gov/wateruseefficiency/landscapeordinance/

DWR October 2009

Model Water Efficient Landscape Ordinance
CALIFORNIA DEPARTMENT OF WATER RESOURCES



Important points to consider...

Water purveyors have an important role.
The enabling statute was directed to local agencies that make land use decisions and approve land development. Active participation by water purveyors can make the implementation, enforcement and follow-up actions of an ordinance more effective.

Most new and rehabilitated landscapes are subject to a water efficient landscape ordinance. Public landscapes and private development projects including developer installed single family and multi-family residential landscapes with at least 2500 sq. ft. of landscape area are subject to the Model Ordinance .

Homeowner provided landscaping at single family and multi-family homes are subject to the Model Ordinance if the landscape area is at least 5000 sq. ft

Existing landscapes are also subject to the Model Ordinance.
Water waste is common in landscapes that are poorly designed or not well maintained. Water waste (from runoff, overspray, low head drainage, leaks and excessive amounts of applied irrigation water in landscapes is prohibited by Section 2, Article X of the California Constitution.

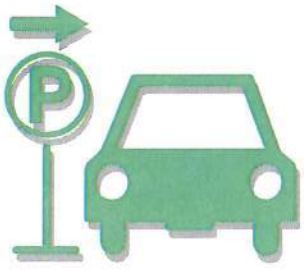
Any landscape installed prior to January 1, 2010, that is at least one acre in size may be subject to irrigation audits, irrigation surveys or water use analysis programs for evaluating irrigation system performance and adherence to the Maximum Applied Water Allowance as defined in the 1992 Model Ordinance with an Evapotranspiration Adjustment Factor (ETAF) of 0.8. Local agencies and water purveyors (designated by the local agency) may institute these or other programs to increase efficiency in existing landscapes.

All new landscapes will be assigned a water budget.
The water budget approach is a provision in the statute that ensures a landscape is allowed sufficient water. There are two water budgets in the Model Ordinance; the Maximum Applied Water Allowance (MAWA) and the Estimated Total Water Use (ETWU).

The MAWA, is the water budget used for compliance and is an annual water allowance based on landscape area, local evapotranspiration and ETAF of 0.7. The ETWU is an annual water use estimation for design purposes and is based on the water needs of the plants actually chosen for a given landscape. The ETWU may not exceed the MAWA.

Water efficient landscapes offer multiple benefits.
Water efficient landscapes will stretch our limited water supplies. Other benefits include reduced irrigation runoff, reduced pollution of waterways, less property damage, less green waste, increased drought resistance and a smaller carbon footprint.

The Department of Water Resources will offer technical assistance.
The Department plans to offer a series of workshops, publications and other assistance for successful adoption and implementation of the Model Ordinance or local water efficient landscape ordinances. Information regarding these resources may be found on the DWR website: **http://www.water.ca.gov/wateruseefficiency/landscapeordinance/**
Questions on the Model Ordinance may be sent by e-mail to DWR staff at: **mweo@water.ca.gov.**



R-3
AUTOMOBILE PARKING

The activities outlined in this fact sheet target the following pollutants:	
Sediment	x
Nutrients	
Bacteria	
Foaming Agents	
Metals	X
Hydrocarbons	X
Hazardous Materials	x
Pesticides and Herbicides	
Other	

Parked automobiles may contribute pollutants to the storm drain because poorly maintained vehicles may leak fluids containing hydrocarbons, metals, and other pollutants. In addition, heavily soiled automobiles may drop clods of dirt onto the parking surface, contributing to the sediment load when runoff is present. During rain events, or wash-down activities, the pollutants may be carried into the storm drain system. The pollution prevention activities outlined in this fact sheets are used to prevent the discharge of pollutants to the storm drain system.

Think before parking your car. Remember - The ocean starts at your front door.

Required Activities

- If required, vehicles have to be removed from the street during designated street sweeping/cleaning times.
- If the automobile is leaking, place a pan or similar collection device under the automobile, until such time as the leak may be repaired.
- Use dry cleaning methods to remove any materials deposited by vehicles (e.g. adsorbents for fluid leaks, sweeping for soil clod deposits).

Recommended Activities

- Park automobiles over permeable surfaces (e.g. gravel, or porous cement).
- Limit vehicle parking to covered areas.
- Perform routine maintenance to minimize fluid leaks, and maximize fuel efficiency.

For additional information contact:
County of Orange, OC **Watershed**
Main: (714) 955-0600/ 24hr Water Pollution Discharge Hotline 1-877-89-SPILL
or visit our website at: www.ocwatersheds.com

- Install gutters that will divert roof runoff away from livestock areas.

Recommended Activities

- In order to properly dispose of pet waste, carry bags, pooper-scooper, or equivalent to safely pick up pet wastes while walking with pets.
- Bathe pets indoors and use less toxic shampoos. When possible, have pets professionally groomed.
- Properly inoculate your pet in order to maintain their health and reduce the possibility of pathogens in pet wastes.
- Maintain healthy and vigorous pastures with at least three inches of leafy material.
- Consider indoor feeding of livestock during heavy rainfall, to minimize manure exposed to potential runoff.
- Locate barns, corrals, and other high use areas on portions of property that either drain away from or are located distant form nearby creeks or storm drains.

For additional information contact:
County of Orange, OC **Watershed**
Main: (714) 955-0600/ 24hr Water Pollution Discharge Hotline 1-877-89-SPILL
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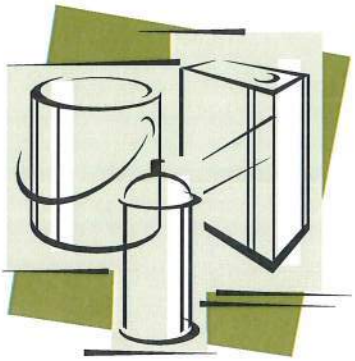


R-7
HOUSEHOLD HAZARDOUS WASTE

Household hazardous wastes (HHW) are defined as waste materials which are typically found in homes or similar sources, which exhibit characteristics such as: corrosivity, ignitability, reactivity, and/or toxicity, or are listed as hazardous materials by EPA.

The activities outlined in this fact sheet target the following pollutants:	
Sediment	
Nutrients	
Bacteria	
Foaming Agents	x
Metals	x
Hydrocarbons	x
Hazardous Materials	x
Pesticides and Herbicides	x
Other	x

List of most common HHW products:

Drain openers
Oven cleaners
Wood and metal cleaners and polishes
Automotive oil and fuel additives
Grease and rust solvents
Carburetor and fuel injection cleaners
Starter fluids
Batteries
Paint Thinners
Paint strippers and removers
Adhesives
Herbicides
Pesticides
Fungicides/wood preservatives

Many types of waste can be recycled, however options for each waste type are limited. Recycling is always preferable to disposal of unwanted materials. All gasoline, antifreeze, waste oil, and lead-acid batteries can be recycled. Latex and oil-based paint can be reused, as well as recycled. Materials that cannot be reused or recycled should be disposed of at a properly permitted landfill.

Think before disposing of any household hazardous waste. Remember - The ocean starts at your front door.

RECYCLE USED OIL

Required Activities

- Dispose of HHW at a local collection facility. Call (714) 834-6752 for the household hazardous waste center closest to your area.
- Household hazardous materials must be stored indoors or under cover, and in closed and labeled containers.
- If safe, contain, clean up, and properly dispose all household hazardous waste spills. If an unsafe condition exists, call 911 to activate the proper response team.

Recommended Activities

- Use non-hazardous or less-hazardous products.
- Participate in HHW reuse and recycling. Call (714) 834-6752 for the participating household hazardous waste centers.

The California Integrated Waste Management Board has a Recycling Hotline (800) 553-2962, that provides information and recycling locations for used oil.

For additional information contact:
County of Orange, OC **Watershed**
Main: (714) 955-0600/ 24hr Water Pollution Discharge Hotline 1-877-89-SPILL
or visit our website at: www.ocwatersheds.com



R-8
WATER CONSERVATION

Excessive irrigation and/or the overuse of water is often the most significant factor in transporting pollutants to the storm drain system. Pollutants from a wide variety of sources including automobile repair and maintenance, automobile washing, automobile parking, home and garden care activities and pet care may dissolve in the water and be transported to the storm drain. In addition, particles and materials coated with fertilizers and pesticides may be suspended in the flow and be transported to the storm drain.

The activities outlined in this fact sheet target the following pollutants:	
Sediment	x
Nutrients	x
Bacteria	x
Foaming Agents	x
Metals	x
Hydrocarbons	x
Hazardous Materials	x
Pesticides and Herbicides	x
Other	x

Hosing off outside areas to wash them down not only consumes large quantities of water, but also transports any pollutants, sediments, and waste to the storm drain system. The pollution prevention activities outlined in this fact sheets are used to prevent the discharge of pollutants to the storm drain system.

Think before using water. Remember - The ocean starts at your front door.

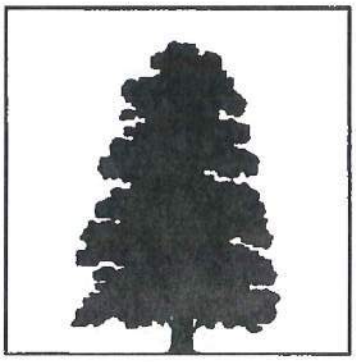
Required Activities

- Irrigation systems must be properly adjusted to reflect seasonal water needs.
- Do not hose off outside surfaces to clean, sweep with a broom instead.

Recommended Activities

- Fix any leaking faucets and eliminate unnecessary water sources.
- Use xeroscaping and drought tolerant landscaping to reduce the watering needs.
- Do not over watering lawns or gardens. Over watering wastes water and promotes diseases.
- Use a bucket to re-soak sponges/rags while washing automobiles and other items outdoors. Use hose only for rinsing.
- Wash automobiles at a commercial car wash employing water recycling.

For additional information contact:
County of Orange, OC **Watershed**
Main: (714) 955-0600/ 24hr Water Pollution Discharge Hotline 1-877-89-SPILL
or visit our website at: www.ocwatersheds.com



FP-2

LANDSCAPE MAINTENANCE

The model procedures described below focus on minimizing the discharge of pesticides and fertilizers, landscape waste, trash, debris, and other pollutants to the storm drain system and receiving waters. Landscape maintenance practices may involve one or more of the following activities:

1. **Mowing, Trimming/Weeding, and Planting**
2. **Irrigation**
3. **Fertilizer and Pesticide Management**
4. **Managing Landscape Waste**
5. **Erosion Control**

POLLUTION PREVENTION:

Pollution prevention measures have been considered and incorporated in the model procedures. Implementation of these measures may be more effective and reduce or eliminate the need to implement other more complicated or costly procedures. Possible pollution prevention measures for landscape maintenance include:

- Implement an integrated pest management (IPM) program. IPM is a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools. Refer to Appendix D, Fertilizer and Pesticide Management Guidance for further details.
- Choose low water using flowers, trees, shrubs, and groundcover.
- Appropriate maintenance (i.e. properly timed fertilizing, weeding, pest control, and pruning) will preserve the landscapes water efficiency.
- Once per year, educate municipal staff on pollution prevention measures.

MODEL PROCEDURES:

1. Mowing, Trimming/Weeding, and Planting

Mowing, Trimming/Weeding

✓ Whenever possible, use mechanical methods of vegetation removal rather than applying herbicides. Use hand weeding where practical.

- ✓ When conducting mechanical or manual weed control, avoid loosening the soil, which could erode into streams or storm drains.
- ✓ Use coarse textured mulches or geotextiles to suppress weed growth and reduce the use of herbicides.
- ✓ Do not blow or rake leaves, etc. into the street or place yard waste in gutters or on dirt shoulders. Sweep up any leaves, litter or residue in gutters or on street.
- ✓ Collect lawn and garden clippings, pruning waste, tree trimmings, and weeds. Chip if necessary, and compost or dispose of at a landfill (see waste management section of this procedure sheet).
- ✓ Place temporarily stockpiled material away from watercourses, and berm or cover stockpiles to prevent material releases to storm drains.

Planting

- ✓ Where feasible, retain and/or plant selected native vegetation whose features are determined to be beneficial. Native vegetation usually requires less maintenance (e.g., irrigation, fertilizer) than planting ornamental vegetation.
- ✓ When planting or replanting consider using low water use groundcovers.

OPTIONAL:

- Careful soil mixing and layering techniques using a topsoil mix or composted organic material can be used as an effective measure to reduce herbicide use and watering.

2. Irrigation

- ✓ Utilize water delivery rates that do not exceed the infiltration rate of the soil.
- ✓ Use timers appropriately or a drip system to prevent runoff and then only irrigate as much as is needed.
- ✓ Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering, and repair leaks in the irrigation system as soon as they are observed.
- ✓ Where practical, use automatic timers to minimize runoff.
- ✓ Use popup sprinkler heads in areas with a lot of activity or where there is a chance the pipes may be broken. Consider the use of mechanisms that reduce water flow to sprinkler heads if broken.
- ✓ If re-claimed water is used for irrigation, ensure that there is no runoff from the landscaped area(s).
- ✓ If bailing of muddy water is required (e.g. when repairing a water line leak), do not put it in the storm drain; pour over landscaped areas.

3. Fertilizer and Pesticide Management

Usage

- ✓ Utilize a comprehensive management system that incorporates integrated pest management techniques.
- ✓ Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides and training of applicators and pest control advisors.
- ✓ Educate and train employees on use of pesticides and in pesticide application techniques to prevent pollution.
- ✓ Pesticide application must be under the supervision of a California qualified pesticide applicator.
- ✓ When applicable use the least toxic pesticides that will do the job. Avoid use of copper-based pesticides if possible.
- ✓ Do not mix or prepare pesticides or fertilizers for application near storm drains.
- ✓ Prepare the minimum amount of pesticide needed for the job and use the lowest rate that will effectively control the pest.
- ✓ Employ techniques to minimize off-target application (e.g. spray drift) of pesticides, including consideration of alternative application techniques.
- ✓ Calibrate fertilizer and pesticide application equipment to avoid excessive application.
- ✓ Periodically test soils for determining proper fertilizer use.
- ✓ Sweep pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water.
- ✓ Inspect pesticide/fertilizer equipment and transportation vehicles daily.
- ✓ Refer to Appendix D for further guidance on Fertilizer and Pesticide management

OPTIONAL:

- Work fertilizers into the soil rather than dumping or broadcasting them onto the surface.
- Use beneficial insects where possible to control pests (green lacewings, ladybugs, praying mantis, ground beetles, parasitic nematodes, trichogramma wasps, seedhead weevils, and spiders prey on detrimental pest species).
- Use slow release fertilizers whenever possible to minimize leaching.

Scheduling

- ✓ Do not use pesticides if rain is expected within 24 hours.
- ✓ Apply pesticides only when wind speeds are low (less than 5 mph).

Disposal

- ✓ Purchase only the amount of pesticide that you can reasonably use in a given time period (month or year depending on the product).
- ✓ Triple rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
- ✓ Dispose of empty pesticide containers according to the instructions on the container label.

4. Managing Landscape Waste

Also see Waste Handling and Disposal procedure sheet

- ✓ Compost leaves, sticks, or other collected vegetation or dispose of at a permitted landfill. Do not dispose of collected vegetation into waterways or storm drainage systems.
- ✓ Place temporarily stockpiled material away from watercourses and storm drain inlets, and berm or cover stockpiles to prevent material releases to the storm drain system.
- ✓ Reduce the use of high nitrogen fertilizers that produce excess growth requiring more frequent mowing or trimming.
- ✓ Inspection of drainage facilities should be conducted to detect illegal dumping of clippings/cuttings in or near these facilities. Materials found should be picked up and properly disposed of.
- ✓ Landscape wastes in and around storm drain inlets should be avoided by either using bagging equipment or by manually picking up the material.

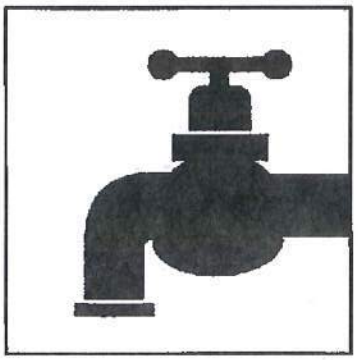
5. Erosion Control

Also see Waste Handling and Disposal procedure sheet

- ✓ Maintain vegetative cover on medians and embankments to prevent soil erosion. Apply mulch or leave clippings to serve as additional cover for soil stabilization and to reduce the velocity of storm water runoff.
- ✓ Minimize the use of disking as a means of vegetation management because the practice may result in erodable barren soil.
- ✓ Confine excavated materials to pervious surfaces away from storm drain inlets, sidewalks, pavement, and ditches. Material must be covered if rain is expected.

LIMITATIONS:

Alternative pest/weed controls may not be available, suitable, or effective in every case.



FP-6

WATER AND SEWER UTILITY OPERATION AND MAINTENANCE

Although the operation and maintenance of public utilities are not considered themselves a chronic source of stormwater pollution, some activities and accidents can result in the discharge of pollutants that can pose a threat to both human health and the quality of receiving waters if they enter the storm drain system. Activities associated with the operation and maintenance of water and sewer utilities to prevent and handle such incidents include the following:

1. **Water Line Maintenance**
2. **Sanitary Sewer Maintenance**
3. **Spill/Leak/Overflow Control, Response, and Containment**

Cities that do not provide maintenance of water and sewer utilities should coordinate with the contracting agency responsible for these activities and ensure that these model procedures are followed.

POLLUTION PREVENTION:

Pollution prevention measures have been considered and incorporated in the model procedures. Implementation of these measures may be more effective and reduce or eliminate the need to implement other more complicated or costly procedures. Possible pollution prevention measures for water and sewer utility operation and maintenance include:

- Inspect potential non-storm water discharge flow paths and clear/cleanup any debris or pollutants found (i.e. remove trash, leaves, sediment, and wipe up liquids, including oil spills).
- Once per year, educate municipal staff on pollution prevention measures.

MODEL PROCEDURES:

1. Water Line Maintenance

Procedures can be employed to reduce pollutants from discharges associated with water utility operation and maintenance activities. Planned discharges may include fire hydrant testing, flushing water supply mains after new construction, flushing lines due to complaints of taste and odor, dewatering mains for maintenance work. Unplanned discharges from treated, recycled water, raw water, and groundwater systems operation and maintenance activities can occur from water main breaks, sheared fire hydrants, equipment malfunction, and operator error.

Planned Discharges

✓ For planned discharges use one of the following options:

- Reuse water for dust suppression, irrigation, or construction compaction
- Discharge to the sanitary sewer system with approval
- Discharge to the storm drain system or to a creek using applicable pollution control measures listed below (this option is ONLY applicable to uncontaminated pumped ground water, water line flushing, fire hydrant testing and flushing, discharges from potable water sources other than water main breaks) and may require a permit from the Regional Water Quality Control Board.

✓ If water is discharged to a storm drain inlet (catch basin), control measures must be put in place to control potential pollutants (i.e. sediment, chlorine, etc.). Examples of some storm drain inlet protection options include:

- Silt fence – appropriate where the inlet drains a relatively flat area.
- Gravel and wire mesh sediment filter – Appropriate where concentrated flows are expected.
- Wooden weir and fabric – use at curb inlets where a compact installation is desired.

✓ Prior to discharge, inspect discharge flow path and clear/cleanup any debris or pollutants found (i.e. remove trash, leaves, sediment, and wipe up liquids, including oil spills).

✓ Select appropriate pollution control measure(s) considering the receiving system (i.e. curb inlet, drop inlet, culvert, creek, etc.) and ensure that the control device(s) fit properly.

✓ General design considerations for inlet protection devices include the following:

- The device should be constructed such that cleaning and disposal of trapped sediment is made easy, while minimizing interference with discharge activities.
- Devices should be constructed so that any standing water resulting from the discharge will not cause excessive inconvenience or flooding/damage to adjacent land or structures.

✓ The effectiveness of control devices must be monitored during the discharge period and any necessary repairs or modifications made as needed.

OPTIONAL:

- Sediment removal may be enhanced by placing filter fabric, gravel bags, etc. at storm drain inlets.

Unplanned Discharges

✓ Stop the discharge as quickly as possible by turning off water source.

✓ Inspect flow path of the discharged water:

- Control erosion along the flow path.
- Identify areas that may produce significant sediment or gullies, use sandbags to redirect the flow.
- Identify erodible areas which may need to be repaired or protected during subsequent repairs or corrective actions

✓ If repairs or corrective action will cause additional discharges of water, select the appropriate procedures for erosion control, chlorine residual, turbidity, and chemical additives. Prevent potential pollutants from entering the flow path and ensure that no additional discharged water enters storm drain inlets.

2. Sanitary Sewer Maintenance

Applicable to municipalities who own and operated a sewage collection system. Facilities that are covered under this program include sanitary sewer pipes and pump stations owned and operated by the Permittee. The owner of the sanitary sewer facilities is the entity responsible for carrying out this prevention and response program.

Sewer System Cleaning

- ✓ Sewer lines should be cleaned on a regular basis to remove grease, grit, and other debris that may lead to sewer backups.
- ✓ Establish routine maintenance program. Cleaning should be conducted at an established minimum frequency and more frequently for problem areas such as restaurants that are identified
- ✓ Cleaning activities may require removal of tree roots and other identified obstructions.

Preventative and Corrective Maintenance

- ✓ During routine maintenance and inspection note the condition of sanitary sewer structures and identify areas that need repair or maintenance. Items to note may include the following:
  - cracked/deteriorating pipes
  - leaking joints/seals at manhole
  - frequent line plugs
  - line generally flows at or near capacity
  - suspected infiltration or exfiltration
- ✓ Document suggestions and requests for repair and report the information to the appropriate manager or supervisor.
- ✓ Prioritize repairs based on the nature and severity of the problem. Immediate clearing of blockage or repair is required where an overflow is currently occurring or for urgent problems that may cause an imminent overflow (e.g. pump station failures, sewer line ruptures, sewer line blockages). These repairs may be temporary until scheduled or capital improvements can be completed.
- ✓ Review previous sewer maintenance records to help identify "hot spots" or areas with frequent maintenance problems and locations of potential system failure.

3. Spill/Leak/Overflow Control, Response, and Containment

Control

Also see Drainage System procedures sheet

- ✓ Refer to countywide *Illicit Discharge Detection and Elimination Program.* Components of this program include:
  - Investigation/inspection and follow-up
  - Elimination of illicit discharges and connections
  - Enforcement of ordinances
  - Respond to sewage spills

- Facilitate public reporting of illicit discharges and connections. A citizen's hotline for reporting observed overflow conditions should be established to supplement the field screening efforts being conducted by the Principal Permittee.

Response and Containment

- ✓ Establish lead department/agency responsible for spill response and containment. Provide coordination within departments.
- ✓ When a spill, leak, and/or overflow occurs, keep sewage from entering the storm drain system to the maximum extent practicable by covering or blocking storm drain inlets or by containing and diverting the sewage away from open channels and other storm drain facilities (using sandbags, inflatable dams, etc.).
- ✓ If a spill reaches the storm drain notify County of Orange Health Care Agency through Control One at (714) 628-7208.
- ✓ Remove the sewage using vacuum equipment or use other measures to divert it back to the sanitary sewer system.
- ✓ Record required information at the spill site.
- ✓ Perform field tests as necessary to determine the source of the spill.
- ✓ Develop additional notification procedures regarding spill reporting as needed.

LIMITATIONS:

Private property access rights needed to perform testing along storm drain right-of-ways. Requirements of municipal ordinance authority for suspected source verification testing necessary for guaranteed rights of entry.

REFERENCES:

California Storm Water Best Management Practice Handbooks. Municipal Best Management Practice Handbook. Prepared by Camp Dresser & McKee, Larry Walker Associates, Uribe and Associates, Resources Planning Associates for Stormwater Quality Task Force. March 1993.

Los Angeles County Stormwater Quality. Public Agency Activities Model Program. On-line: http://ladpw.org/wmd/npdes/public_TC.cfm

Santa Clara Valley Urban Runoff Pollution Prevention Program. 1997 Urban Runoff Management Plan. September 1997, updated October 2000.

Santa Clara Valley Urban Runoff Pollution Prevention Program. Water Utility Pollution Prevention Plan.

Non-Stormwater Discharges SC-10

Description

Non-stormwater discharges (NSWDs) are flows that do not consist entirely of stormwater. Some non-stormwater discharges do not include pollutants and may be discharged to the storm drain if local regulations allow. These include uncontaminated groundwater and natural springs. There are also some non-stormwater discharges that typically do not contain pollutants and may be discharged to the storm drain with conditions. These include: potable water sources, fire hydrant flushing, air conditioner condensate, landscape irrigation drainage and landscape watering, emergency firefighting, etc. as discussed in Section 2.

However there are certain non-stormwater discharges that pose an environmental concern. These discharges may originate from illegal dumping of industrial material or wastes and illegal connections such as internal floor drains, appliances, industrial processes, sinks, and toilets that are illegally connected to the nearby storm drainage system through on-site drainage and piping. These unauthorized discharges (examples of which may include: process waste waters, cooling waters, wash waters, and sanitary wastewater) can carry substances such as paint, oil, fuel and other automotive fluids, chemicals and other pollutants into storm drains.

Non-stormwater discharges will need to be addressed through a combination of detection and elimination. The ultimate goal is to effectively eliminate unauthorized non-stormwater discharges to the stormwater drainage system through implementation of measures to detect, correct, and enforce against illicit connections and illegal discharges of

Objectives
■ *Cover*
■ *Contain*
■ *Educate*
■ *Reduce/Minimize*
■ *Product Substitution*

Targeted Constituents	
Sediment	
Nutrients	✓
Trash	
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓

Minimum BMPs Covered	
Good Housekeeping	✓
Preventative Maintenance	
Spill and Leak Prevention and Response	✓
Material Handling & Waste Management	
Erosion and Sediment Controls	
Employee Training Program	✓
Quality Assurance Record Keeping	✓

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION®

pollutants on streets and into the storm drain system and downstream water bodies.

Approach

Initially the Discharger must make an assessment of non-stormwater discharges to determine which types must be eliminated or addressed through BMPs. The focus of the following approach is the elimination of unauthorized non-stormwater discharges. See other BMP Fact Sheets for activity-specific pollution prevention procedures.

General Pollution Prevention Protocols

- Implement waste management controls described in SC-34 Waste Handling and Disposal.

- Develop clear protocols and lines of communication for effectively prohibiting non-stormwater discharges, especially those that are not classified as hazardous. These are often not responded to as effectively as they need to be.

- Stencil or demarcate storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" or similar stenciled or demarcated next to them to warn against ignorant or unintentional dumping of pollutants into the storm drainage system.

- Manage and control sources of water such as hose bibs, faucets, wash racks, irrigation heads, etc. Identify hoses and faucets in the SWPPP, and post signage for appropriate use.

Non-Stormwater Discharge Investigation Protocols

Identifying the sources of non-stormwater discharges requires the Discharger to conduct an investigation of the facility at regular intervals. There are several categories of non-stormwater discharges:

- Visible, easily identifiable discharges, typically generated as surface runoff, such as uncontained surface runoff from vehicle or equipment washing; and

- Non-visible, (e.g., subsurface) discharges into the site drainage system through a variety of pathways that are not obvious.

The approach to detecting and eliminating non-stormwater discharges will vary considerably, as discussed below:

Visible and identifiable discharges

- Conduct routine inspections of the facilities and of each major activity area and identify visible evidence of unauthorized non-stormwater discharges. This may include:

  - ✓ Visual observations of actual discharges occurring;

- ✓ Evidence of surface staining, discoloring etc. that indicates that discharges have occurred;
- ✓ Pools of water in low lying areas when a rain event has not occurred; and
- ✓ Discussions with operations personnel to understand practices that may lead to unauthorized discharges.

- ☐ If evidence of non-stormwater discharges is discovered:
  - ✓ Document the location and circumstances using Worksheets 5 and 6 (Section 2 of the manual), including digital photos;
  - ✓ Identify and implement any quick remedy or corrective action (e.g., moving uncovered containers inside or to a proper location); and
  - ✓ Develop a plan to eliminate the discharge. Consult the appropriate activity-specific BMP Fact Sheet for alternative approaches to manage and eliminate the discharge.
- ☐ Consult the appropriate activity-specific BMP Fact Sheet for alternative approaches to manage and eliminate the discharge. Make sure the facility SWPPP is up-to-date and includes applicable BMPs to address the non-stormwater discharge.

Other Illegal Discharges (Non visible)

Illicit Connections

- ☐ Locate discharges from the industrial storm drainage system to the municipal storm drain system through review of "as-built" piping schematics.
- ☐ Isolate problem areas and plug illicit discharge points.
- ☐ Locate and evaluate discharges to the storm drain system.
- ☐ Visual Inspection and Inventory:
  - ✓ Inventory and inspect each discharge point during dry weather.
  - ✓ Keep in mind that drainage from a storm event can continue for a day or two following the end of a storm and groundwater may infiltrate the underground stormwater collection system.
  - ✓ Non-stormwater discharges are often intermittent and may require periodic inspections.

Review Infield Piping

- ☐ A review of the "as-built" piping schematic is a way to determine if there are any connections to the stormwater collection system.

- Inspect the path of loading/unloading area drain inlets and floor drains in older buildings.

- Never assume storm drains are connected to the sanitary sewer system.

Monitoring for investigation/detection of illegal discharges

- If a suspected illegal or unknown discharge is detected, monitoring of the discharge may help identify the content and/or suggest the source. This may be done with a field screening analysis, flow meter measurements, or by collecting a sample for laboratory analysis. Section 5 and Appendix D describe the necessary field equipment and procedures for field investigations.

- Investigative monitoring may be conducted over time. For example if, a discharge is intermittent, then monitoring might be conducted to determine the timing of the discharge to determine the source.

- Investigative monitoring may be conducted over a spatial area. For example, if a discharge is observed in a pipe, then monitoring might be conducted at accessible upstream locations in order to pinpoint the source of the discharge.

- Generally, investigative monitoring requiring collection of samples and submittal for lab analysis requires proper planning and specially trained staff.

Smoke Testing

Smoke testing of wastewater and stormwater collection systems is used to detect connections between the two piping systems. Smoke testing is generally performed at a downstream location and the smoke is forced upstream using blowers to create positive pressure. The advantage to smoke testing is that it can potentially identify multiple potential discharge sources at once.

- Smoke testing uses a harmless, non-toxic smoke cartridges developed specifically for this purpose.

- Smoke testing requires specialized equipment (e.g., cartridges, blowers) and is generally only appropriate for specially trained staff.

- A Standard Operating Procedure (SOP) for smoke testing is highly desirable. The SOP should address the following elements:

  - ✓ Proper planning and notification of nearby residents and emergency services is necessary since introducing smoke into the system may result in false alarms;

  - ✓ During dry weather, the stormwater collection system is filled with smoke and then traced back to sources;

- ✓ Temporary isolation of segments of pipe using sand bags is often needed to force the smoke into leaking pipes; and

- ✓ The appearance of smoke in a waste vent pipe, at a sewer manhole, or even the base of a toilet indicates that there may be a connection between the sanitary and storm water systems.

- Most municipal wastewater agencies will have necessary staff and equipment to conduct smoke testing and they should be contacted if cross connections with the sanitary sewer are suspected. See SC-44 Drainage System Maintenance for more information.

Dye Testing

- Dye testing is typically performed when there is a suspected specific pollutant source and location (i.e., leaking sanitary sewer) and there is evidence of dry weather flows in the stormwater collection system.

- Dye is released at a probable upstream source location, either the facility's sanitary or process wastewater system. The dye must be released with a sufficient volume of water to flush the system.

- Operators then visually examine the downstream discharge points from the stormwater collection system for the presence of the dye.

- Dye testing can be performed informally using commercially available products in order to conduct an initial investigation for fairly obvious cross-connections.

- More detailed dye testing should be performed by properly trained staff and follow SOPs. Specialized equipment such as fluorometers may be necessary to detect low concentrations of dye.

- Most municipal wastewater agencies will have necessary staff and equipment to conduct dye testing and they should be contacted if cross connections with the sanitary sewer are suspected.

TV Inspection of Drainage System

- Closed Circuit Television (CCTV) can be employed to visually identify illicit connections to the industrial storm drainage system. Two types of CCTV systems are available: (1) a small specially designed camera that can be manually pushed on a stiff cable through storm drains to observe the interior of the piping, or (2) a larger remote operated video camera on treads or wheels that can be guided through storm drains to view the interior of the pipe.

- CCTV systems often include a high-pressure water jet and camera on a flexible cable. The water jet cleans debris and biofilm off the inside of pipes so the camera can take video images of the pipe condition.

- CCTV units can detect large cracks and other defects such as offsets in pipe ends caused by root intrusions or shifting substrate.
- CCTV can also be used to detect dye introduced into the sanitary sewer.
- CCTV inspections require specialized equipment and properly trained staff and are generally best left to specialized contractors or municipal public works staff.

Illegal Dumping

- Substances illegally dumped on streets and into the storm drain systems and creeks may include paints, used oil and other automotive fluids, construction debris, chemicals, fresh concrete, leaves, grass clippings, and pet wastes. These wastes can cause stormwater and receiving water quality problems as well as clog the storm drain system itself.
- Establish a system for tracking incidents. The system should be designed to identify the following:
  - ✓ Illegal dumping hot spots;
  - ✓ Types and quantities (in some cases) of wastes;
  - ✓ Patterns in time of occurrence (time of day/night, month, or year);
  - ✓ Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills);
  - ✓ An anonymous tip/reporting mechanism; and
  - ✓ Evidence of responsible parties (e.g., tagging, encampments, etc.).
- One of the keys to success of reducing or eliminating illegal dumping is increasing the number of people at the facility who are aware of the problem and who have the tools to at least identify the incident, if not correct it. Therefore, train field staff to recognize and report the incidents.

Once a site has been cleaned:

- Post "No Dumping" signs with a phone number for reporting dumping and disposal.
- Landscaping and beautification efforts of hot spots may also discourage future dumping, as well as provide open space and increase property values.
- Lighting or barriers may also be needed to discourage future dumping.
- See fact sheet SC-11 Spill Prevention, Control, and Cleanup.

Inspection

- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs.
- Conduct field investigations of the industrial storm drain system for potential sources of non-stormwater discharges.
- Pro-actively conduct investigations of high priority areas. Based on historical data, prioritize specific geographic areas and/or incident type for pro-active investigations.



Spill and Leak Prevention and Response

- On paved surfaces, clean up spills with as little water as possible. Use a rag for small spills, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to a certified laundry (rags) or disposed of as hazardous waste.
- Never hose down or bury dry material spills. Sweep up the material and dispose of properly.
- Use adsorbent materials on small spills rather than hosing down the spill. Remove the adsorbent materials promptly and dispose of properly.
- For larger spills, a private spill cleanup company or Hazmat team may be necessary.
- See SC-11 Spill Prevention Control and Cleanup.



Employee Training Program

- Training of technical staff in identifying and documenting illegal dumping incidents is required. The frequency of training must be presented in the SWPPP, and depends on site-specific industrial materials and activities.
- Consider posting a quick reference table near storm drains to reinforce training.
- Train employees to identify non-stormwater discharges and report discharges to the appropriate departments.
- Educate employees about spill prevention and cleanup.
- Well-trained employees can reduce human errors that lead to accidental releases or spills. The employee should have the tools and knowledge to immediately begin cleaning up a spill should one occur. Employees should be familiar with the Spill Prevention Control and Countermeasure Plan. Employees should be able to identify work/jobs with high potential for spills and suggest methods to reduce possibility.
- Determine and implement appropriate outreach efforts to reduce non-permissible non-stormwater discharges.

- Conduct spill response drills annually (if no events occurred) in order to evaluate the effectiveness of the plan.
- When a responsible party is identified, educate the party on the impacts of his or her actions.



Quality Assurance and Record Keeping

Performance Evaluation

- Annually review internal investigation results; assess whether goals were met and what changes or improvements are necessary.
- Obtain feedback from personnel assigned to respond to, or inspect for, illicit connections and illegal dumping incidents.
- Develop document and data management procedures.
- A database is useful for defining and tracking the magnitude and location of the problem.
- Report prohibited non-stormwater discharges observed during the course of normal daily activities so they can be investigated, contained, and cleaned up or eliminated.
- Document that non-stormwater discharges have been eliminated by recording tests performed, methods used, dates of testing, and any on-site drainage points observed.
- Annually document and report the results of the program.
- Maintain documentation of illicit connection and illegal dumping incidents, including significant conditionally exempt discharges that are not properly managed.
- Document training activities.

Potential Limitations and Work-Arounds

Some facilities may have space constraints, limited staffing and time limitations that may preclude implementation of BMPs. Provided below are typical limitations and recommended "work-arounds."

- Many facilities do not have accurate, up-to-date 'as-built' plans or drawings which may be necessary in order to conduct non-stormwater discharge assessments.
  - ✓ Online tools such as Google Earth™ can provide an aerial view of the facility and may be useful in understanding drainage patterns and potential sources of non-stormwater discharges
  - ✓ Local municipal jurisdictions may have useful drainage systems maps.

- Video surveillance cameras are commonly used to secure the perimeter of industrial facilities against break-ins and theft. These surveillance systems may also be useful for capturing illegal dumping activities. Minor, temporary adjustments to the field of view of existing surveillance camera systems to target known or suspected problem areas may be a cost-effective way of capturing illegal dumping activities and identifying the perpetrators.

Potential Capital Facility Costs and Operation & Maintenance Requirements

Facilities

- Capital facility cost requirements may be minimal unless cross-connections to storm drains are detected.
- Indoor floor drains may require re-plumbing if cross-connections are detected.
- Leaky sanitary sewers will require repair or replacement which can have significant costs depending on the size and industrial activity at the facility.

Maintenance (including administrative and staffing)

- The primary effort is for staff time and depends on how aggressively a program is implemented.
- Costs for containment, and disposal of any leak or discharge is borne by the Discharger.
- Illicit connections can be difficult to locate especially if there is groundwater infiltration.
- Illegal dumping and illicit connection violations requires technical staff to detect and investigate them.

Supplemental Information

Permit Requirements

The IGP authorizes certain Non-Storm Water Discharges (NSWDs) provided BMPs are included in the SWPPP and implemented to:

- Reduce or prevent the contact of authorized NSWDs with materials or equipment that are potential sources of pollutants;
- Reduce, to the extent practicable, the flow or volume of authorized NSWDs;
- Ensure that authorized NSWDs do not contain quantities of pollutants that cause or contribute to an exceedance of a water quality standards (WQS); and,

- Reduce or prevent discharges of pollutants in authorized NSWDs in a manner that reflects best industry practice considering technological availability and economic practicability and achievability."

References and Resources

Center for Watershed Protection, 2004. *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, EPA Cooperative Agreement X-82907801-0.

Dublin San Ramon Sanitation District. http://www.dsrsd.com/wwrw/smoketest.html.

Orange County Stormwater Program, Best Management Practices for Industrial/Commercial Business Activities. Available online at: http://ocwatersheds.com/documents/bmp/industrialcommercialbusinessesactivities.

Sacramento Stormwater Management Program, *Best Management Practices for Industrial Storm Water Pollution Control*, Available online at: http://www.msa.saccounty.net/sactostormwater/documents/guides/industrial-BMP-manual.pdf.

Santa Clara Valley Urban Runoff Pollution Prevention Program. http://www.scvurppp.org.

Southern California Coastal Water Research Project, 2013. *The California Microbial Source Identification Manual: A Tiered Approach to Identifying Fecal Pollution Sources to Beaches,* Technical Report 804.

The Storm Water Managers Resource Center, http://www.stormwatercenter.net/.

US EPA. National Pollutant Discharge Elimination System. Available online at: http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=factsheet_results&view=specific&bmp=111.

WEF Press Alexandria, Virginia, 2009.Existing Sewer Evaluation and Rehabilitation: *WEF Manual of Practice No. FD-6 ASCE/EWRI Manuals and Reports on Engineering Practice No. 62, Third Edition.*

Building & Grounds Maintenance SC-41

Description

Stormwater runoff from building and grounds maintenance activities can be contaminated with toxic hydrocarbons in solvents, fertilizers and pesticides, suspended solids, heavy metals, abnormal pH, and oils and greases. Utilizing the protocols in this fact sheet will prevent or reduce the discharge of pollutants to stormwater from building and grounds maintenance activities by washing and cleaning up with as little water as possible, following good landscape management practices, preventing and cleaning up spills immediately, keeping debris from entering the storm drains, and maintaining the stormwater collection system.

Approach

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

General Pollution Prevention Protocols

- ☐ Switch to non-toxic chemicals for maintenance to the maximum extent possible.
- ☐ Choose cleaning agents that can be recycled.
- ☐ Encourage proper lawn management and landscaping, including use of native vegetation.
- ☐ Encourage use of Integrated Pest Management techniques for pest control.
- ☐ Encourage proper onsite recycling of yard trimmings.
- ☐ Recycle residual paints, solvents, lumber, and other material as much as possible.

Objectives
■ *Cover*
■ *Contain*
■ *Educate*
■ *Reduce/Minimize*
■ *Product Substitution*

Targeted Constituents	
Sediment	✓
Nutrients	✓
Trash	
Metals	✓
Bacteria	✓
Oil and Grease	
Organics	

Minimum BMPs Covered	
Good Housekeeping	✓
Preventative Maintenance	
Spill and Leak Prevention and Response	✓
Material Handling & Waste Management	✓
Erosion and Sediment Controls	
Employee Training Program	✓
Quality Assurance Record Keeping	✓

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- Clean work areas at the end of each work shift using dry cleaning methods such as sweeping and vacuuming.



Good Housekeeping

Pressure Washing of Buildings, Rooftops, and Other Large Objects

- In situations where soaps or detergents are used and the surrounding area is paved, pressure washers must use a water collection device that enables collection of wash water and associated solids. A sump pump, wet vacuum or similarly effective device must be used to collect the runoff and loose materials. The collected runoff and solids must be disposed of properly.

- If soaps or detergents are not used, and the surrounding area is paved, wash runoff does not have to be collected but must be screened. Pressure washers must use filter fabric or some other type of screen on the ground and/or in the catch basin to trap the particles in wash water runoff.

- If you are pressure washing on a grassed area (with or without soap), runoff must be dispersed as sheet flow as much as possible, rather than as a concentrated stream. The wash runoff must remain on the grass and not drain to pavement.

Landscaping Activities

- Dispose of grass clippings, leaves, sticks, or other collected vegetation as garbage, or by composting. Do not dispose of collected vegetation into waterways or storm drainage systems.

- Use mulch or other erosion control measures on exposed soils. See also SC-40, Contaminated and Erodible Areas, for more information.

Building Repair, Remodeling, and Construction

- Do not dump any toxic substance or liquid waste on the pavement, the ground, or toward a storm drain.

- Use ground or drop cloths underneath outdoor painting, scraping, and sandblasting work, and properly dispose of collected material daily.

- Use a ground cloth or oversized tub for activities such as paint mixing and tool cleaning.

- Clean paintbrushes and tools covered with water-based paints in sinks connected to sanitary sewers or in portable containers that can be dumped into a sanitary sewer drain. Brushes and tools covered with non-water-based paints, finishes, or other materials must be cleaned in a manner that enables collection of used solvents (e.g., paint thinner, turpentine, etc.) for recycling or proper disposal.

- Use a storm drain cover, filter fabric, or similarly effective runoff control mechanism if dust, grit, wash water, or other pollutants may escape the work area and enter a catch basin. This is particularly necessary on rainy days. The containment device(s) must be in place at the beginning of the work day, and accumulated dirty runoff and

solids must be collected and disposed of before removing the containment device(s) at the end of the work day.

- If you need to de-water an excavation site, you may need to filter the water before discharging to a catch basin or off-site. If directed off-site, you should direct the water through hay bales and filter fabric or use other sediment filters or traps.
- Store toxic material under cover during precipitation events and when not in use. A cover would include tarps or other temporary cover material.

Mowing, Trimming, and Planting

- Dispose of leaves, sticks, or other collected vegetation as garbage, by composting or at a permitted landfill. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures when soils are exposed.
- Place temporarily stockpiled material away from watercourses and drain inlets, and berm or cover stockpiles to prevent material releases to the storm drain system.
- Consider an alternative approach when bailing out muddy water: do not put it in the storm drain; pour over landscaped areas.
- Use hand weeding where practical.

Fertilizer and Pesticide Management

- Do not use pesticides if rain is expected.
- Do not mix or prepare pesticides for application near storm drains.
- Use the minimum amount needed for the job.
- Calibrate fertilizer distributors to avoid excessive application.
- Employ techniques to minimize off-target application (e.g., spray drift) of pesticides, including consideration of alternative application techniques.
- Apply pesticides only when wind speeds are low.
- Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface.
- Irrigate slowly to prevent runoff and then only as much as is needed.
- Clean pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water.

Inspection

- Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering and repair leaks in the irrigation system as soon as they are observed.

Building & Grounds Maintenance SC-41



Spill Response and Prevention Procedures

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Place a stockpile of spill cleanup materials, such as brooms, dustpans, and vacuum sweepers (if desired) near the storage area where it will be readily accessible.
- Have employees trained in spill containment and cleanup present during the loading/unloading of dangerous wastes, liquid chemicals, or other materials.
- Familiarize employees with the Spill Prevention Control and Countermeasure Plan.
- Clean up spills immediately.



Material Handling and Waste Management

- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides and training of applicators and pest control advisors.
- Use less toxic pesticides that will do the job when applicable. Avoid use of copper-based pesticides if possible.
- Dispose of empty pesticide containers according to the instructions on the container label.
- Use up the pesticides. Rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
- Implement storage requirements for pesticide products with guidance from the local fire department and County Agricultural Commissioner. Provide secondary containment for pesticides.



Employee Training Program

- Educate and train employees on pesticide use and in pesticide application techniques to prevent pollution.
- Train employees and contractors in proper techniques for spill containment and cleanup.
- Be sure the frequency of training takes into account the complexity of the operations and the needs of individual staff.



Quality Assurance and Record Keeping

- Keep accurate logs that document maintenance activities performed and minimum BMP measures implemented.
- Keep accurate logs of spill response actions that document what was spilled, how it was cleaned up, and how the waste was disposed.
- Establish procedures to complete logs and file them in the central office.

Potential Capital Facility Costs and Operation & Maintenance Requirements

Facilities

- Additional capital costs are not anticipated for building and grounds maintenance. Implementation of the minimum BMPs described above should be conducted as part of regular site operations.

Maintenance

- Maintenance activities for the BMPs described above will be minimal, and no additional cost is anticipated.

Supplemental Information

Fire Sprinkler Line Flushing

Site fire sprinkler line flushing may be a source of non-stormwater runoff pollution. The water entering the system is usually potable water, though in some areas it may be non-potable reclaimed wastewater. There are subsequent factors that may drastically reduce the quality of the water in such systems. Black iron pipe is usually used since it is cheaper than potable piping, but it is subject to rusting and results in lower quality water. Initially, the black iron pipe has an oil coating to protect it from rusting between manufacture and installation; this will contaminate the water from the first flush but not from subsequent flushes. Nitrates, poly-phosphates and other corrosion inhibitors, as well as fire suppressants and antifreeze may be added to the sprinkler water system. Water generally remains in the sprinkler system a long time (typically a year) and between flushes may accumulate iron, manganese, lead, copper, nickel, and zinc. The water generally becomes anoxic and contains living and dead bacteria and breakdown products from chlorination. This may result in a significant BOD problem and the water often smells. Consequently dispose fire sprinkler line flush water into the sanitary sewer. Do not allow discharge to storm drain or infiltration due to potential high levels of pollutants in fire sprinkler line water.

References and Resources

City of Seattle, Seattle Public Utilities Department of Planning and Development, 2009. *Stormwater Manual Vol. 1 Source Control Technical Requirements Manual.*

Kennedy/Jenks Consultants, 2007. *The Truckee Meadows Industrial and Commercial Storm Water Best Management Practices Handbook*. Available online at: http://www.cityofsparks.us/sites/default/files/assets/documents/env-control/construction/TM-I-C_BMP_Handbook_2-07-final.pdf.

Orange County Stormwater Program, Best Management Practices for Industrial/Commercial Business Activities. Available online at: http://ocwatersheds.com/documents/bmp/industrialcommercialbusinessesactivities.

Sacramento Stormwater Management Program. *Best Management Practices for Industrial Storm Water Pollution Control*. Available online at:

http://www.msa.saccounty.net/sactostormwater/documents/guides/industrial-BMP-manual.pdf.

US EPA, 1997. *Best Management Practices Handbook for Hazardous Waste Containers*. Available online at: http://www.epa.gov/region6/6en/h/handbk4.pdf.

Ventura Countywide Stormwater Management Program Clean Business Fact Sheets. Available online at: http://www.vcstormwater.org/documents/programs_business/building.pdf.

Housekeeping Practices SC-60

Description

Promote efficient and safe housekeeping practices (storage, use, and cleanup) when handling potentially harmful materials such as fertilizers, pesticides, cleaning solutions, paint products, automotive products, and swimming pool chemicals. Related information is provided in BMP fact sheets SC-11 Spill Prevention, Control & Cleanup and SC-34 Waste Handling & Disposal.

Approach

Pollution Prevention

- Purchase only the amount of material that will be needed for foreseeable use. In most cases this will result in cost savings in both purchasing and disposal. See SC-61 Safer Alternative Products for additional information.
- Be aware of new products that may do the same job with less environmental risk and for less or the equivalent cost. Total cost must be used here; this includes purchase price, transportation costs, storage costs, use related costs, clean up costs and disposal costs.

Suggested Protocols

General

- Keep work sites clean and orderly. Remove debris in a timely fashion. Sweep the area.
- Dispose of wash water, sweepings, and sediments, properly.
- Recycle or dispose of fluids properly.
- Establish a daily checklist of office, yard and plant areas to confirm cleanliness and adherence to proper storage and security. Specific employees should be assigned specific inspection responsibilities and given the authority to remedy any problems found.
- Post waste disposal charts in appropriate locations detailing for each waste its hazardous nature (poison, corrosive, flammable), prohibitions on its disposal (dumpster, drain, sewer) and the recommended disposal method (recycle, sewer, burn, storage, landfill).
- Summarize the chosen BMPs applicable to your operation and post them in appropriate conspicuous places.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

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- Require a signed checklist from every user of any hazardous material detailing amount taken, amount used, amount returned and disposal of spent material.
- Do a before audit of your site to establish baseline conditions and regular subsequent audits to note any changes and whether conditions are improving or deteriorating.
- Keep records of water, air and solid waste quantities and quality tests and their disposition.
- Maintain a mass balance of incoming, outgoing and on hand materials so you know when there are unknown losses that need to be tracked down and accounted for.
- Use and reward employee suggestions related to BMPs, hazards, pollution reduction, work place safety, cost reduction, alternative materials and procedures, recycling and disposal.
- Have, and review regularly, a contingency plan for spills, leaks, weather extremes etc. Make sure all employees know about it and what their role is so that it comes into force automatically.

Training

- Train all employees, management, office, yard, manufacturing, field and clerical in BMPs and pollution prevention and make them accountable.
- Train municipal employees who handle potentially harmful materials in good housekeeping practices.
- Train personnel who use pesticides in the proper use of the pesticides. The California Department of Pesticide Regulation license pesticide dealers, certify pesticide applicators and conduct onsite inspections.
- Train employees and contractors in proper techniques for spill containment and cleanup. The employee should have the tools and knowledge to immediately begin cleaning up a spill if one should occur.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup.
- Keep your Spill Prevention Control and Countermeasure (SPCC) plant up-to-date, and implement accordingly.
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- There are no major limitations to this best management practice.
- There are no regulatory requirements to this BMP. Existing regulations already require municipalities to properly store, use, and dispose of hazardous materials

Requirements

Costs

- Minimal cost associated with this BMP. Implementation of good housekeeping practices may result in cost savings as these procedures may reduce the need for more costly BMPs.

Maintenance

- Ongoing maintenance required to keep a clean site. Level of effort is a function of site size and type of activities.

Supplemental Information

Further Detail of the BMP

- The California Integrated Waste Management Board's Recycling Hotline, 1-800-553-2962, provides information on household hazardous waste collection programs and facilities.

Examples

There are a number of communities with effective programs. The most pro-active include Santa Clara County and the City of Palo Alto, the City and County of San Francisco, and the Municipality of Metropolitan Seattle (Metro).

References and Resources

British Columbia Lake Stewardship Society. Best Management Practices to Protect Water Quality from Non-Point Source Pollution. March 2000.
http://www.nalms.org/bclss/bmphome.html#bmp

King County Stormwater Pollution Control Manual - http://dnr.metrokc.gov/wlr/dss/spcm.htm

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities, Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality Control Board. July, 1998, Revised by California Coastal Commission, February 2002.

Orange County Stormwater Program
http://www.ocwatersheds.com/stormwater/swp_introduction.asp

San Mateo STOPPP - (http://stoppp.tripod.com/bmp.html)

Plaza and Sidewalk Cleaning SC-71



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Description

Pollutants on sidewalks and other pedestrian traffic areas and plazas are typically due to littering and vehicle use. This fact sheet describes good housekeeping practices that can be incorporated into the municipality's existing cleaning and maintenance program.

Approach

Pollution Prevention

- Use dry cleaning methods whenever practical for surface cleaning activities.
- Use the least toxic materials available (e.g. water based paints, gels or sprays for graffiti removal).

Suggested Protocols

Surface Cleaning

- Regularly broom (dry) sweep sidewalk, plaza and parking lot areas to minimize cleaning with water.
- Dry cleanup first (sweep, collect, and dispose of debris and trash) when cleaning sidewalks or plazas, then wash with or without soap.
- Block the storm drain or contain runoff when cleaning with water. Discharge wash water to landscaping or collect water and pump to a tank or discharge to sanitary sewer if allowed. (Permission may be required from local sanitation district.)

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- Block the storm drain or contain runoff when washing parking areas, driveways or drive-throughs. Use absorbents to pick up oil; then dry sweep. Clean with or without soap. Collect water and pump to a tank or discharge to sanitary sewer if allowed. Street Repair and Maintenance.

Graffiti Removal

- Avoid graffiti abatement activities during rain events.
- Implement the procedures under Painting and Paint Removal in SC-70 Roads, Streets, and Highway Operation and Maintenance fact sheet when graffiti is removed by painting over.
- Direct runoff from sand blasting and high pressure washing (with no cleaning agents) into a dirt or landscaped area after treating with an appropriate filtering device.
- Plug nearby storm drain inlets and vacuum/pump wash water to the sanitary sewer if authorized to do so if a graffiti abatement method generates wash water containing a cleaning compound (such as high pressure washing with a cleaning compound). Ensure that a non-hazardous cleaning compound is used or dispose as hazardous waste, as appropriate.

Surface Removal and Repair

- Schedule surface removal activities for dry weather if possible.
- Avoid creating excess dust when breaking asphalt or concrete.
- Take measures to protect nearby storm drain inlets prior to breaking up asphalt or concrete (e.g. place hay bales or sand bags around inlets). Clean afterwards by sweeping up as much material as possible.
- Designate an area for clean up and proper disposal of excess materials.
- Remove and recycle as much of the broken pavement as possible to avoid contact with rainfall and stormwater runoff.
- When making saw cuts in pavement, use as little water as possible. Cover each storm drain inlet completely with filter fabric during the sawing operation and contain the slurry by placing straw bales, sandbags, or gravel dams around the inlets. After the liquid drains or evaporates, shovel or vacuum the slurry residue from the pavement or gutter and remove from site.
- Always dry sweep first to clean up tracked dirt. Use a street sweeper or vacuum truck. Do not dump vacuumed liquid in storm drains. Once dry sweeping is complete, the area may be hosed down if needed. Wash water should be directed to landscaping or collected and pumped to the sanitary sewer if allowed.

Concrete Installation and Repair

- Schedule asphalt and concrete activities for dry weather.

- Take measures to protect any nearby storm drain inlets and adjacent watercourses, prior to breaking up asphalt or concrete (e.g. place san bags around inlets or work areas).
- Limit the amount of fresh concrete or cement mortar mixed, mix only what is needed for the job.
- Store concrete materials under cover, away from drainage areas. Secure bags of cement after they are open. Be sure to keep wind-blown cement powder away from streets, gutters, storm drains, rainfall, and runoff.
- Return leftover materials to the transit mixer. Dispose of small amounts of hardened excess concrete, grout, and mortar in the trash.
- Do not wash sweepings from exposed aggregate concrete into the street or storm drain. Collect and return sweepings to aggregate base stockpile, or dispose in the trash.
- Protect applications of fresh concrete from rainfall and runoff until the material has dried.
- Do not allow excess concrete to be dumped onsite, except in designated areas.
- Wash concrete trucks off site or in designated areas on site designed to preclude discharge of wash water to drainage system.

Controlling Litter

- Post "No Littering" signs and enforce anti-litter laws.
- Provide litter receptacles in busy, high pedestrian traffic areas of the community, at recreational facilities, and at community events.
- Cover litter receptacles and clean out frequently to prevent leaking/spillage or overflow.
- Clean parking lots on a regular basis with a street sweeper.

Training

- Provide regular training to field employees and/or contractors regarding surface cleaning and proper operation of equipment.
- Train employee and contractors in proper techniques for spill containment and cleanup.
- Use a training log or similar method to document training.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup.
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- Limitations related to sweeping activities at large parking facilities may include current sweeper technology to remove oil and grease.
- Surface cleaning activities that require discharges to the local sewering agency will require coordination with the agency.
- Arrangements for disposal of the swept material collected must be made, as well as accurate tracking of the areas swept and the frequency of sweeping.

Requirements

Costs

- The largest expenditures for sweeping and cleaning of sidewalks, plazas, and parking lots are in staffing and equipment. Sweeping of these areas should be incorporated into street sweeping programs to reduce costs.

Maintenance

Not applicable

Supplemental Information

Further Detail of the BMP

Community education, such as informing residents about their options for recycling and waste disposal, as well as the consequences of littering, can instill a sense of citizen responsibility and potentially reduce the amount of maintenance required by the municipality.

Additional BMPs that should be considered for parking lot areas include:

- Allow sheet runoff to flow into biofilters (vegetated strip and swale) and infiltration devices.
- Utilize sand filters or oleophilic collectors for oily waste in low concentrations.
- Arrange rooftop drains to prevent drainage directly onto paved surfaces.
- Design lot to include semi-permeable hardscape.
- Structural BMPs such as storm drain inlet filters can be very effective in reducing the amount of pollutants discharged from parking facilities during periods of rain.

References and Resources

Bay Area Stormwater Management Agencies Association (BASMAA). 1996. Pollution From Surface Cleaning Folder http://www.basmaa.org

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities. Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality Control Board. July. 1998.

Oregon Association of Clean Water Agencies. Oregon Municipal Stormwater Toolbox for Maintenance Practices. June 1998.

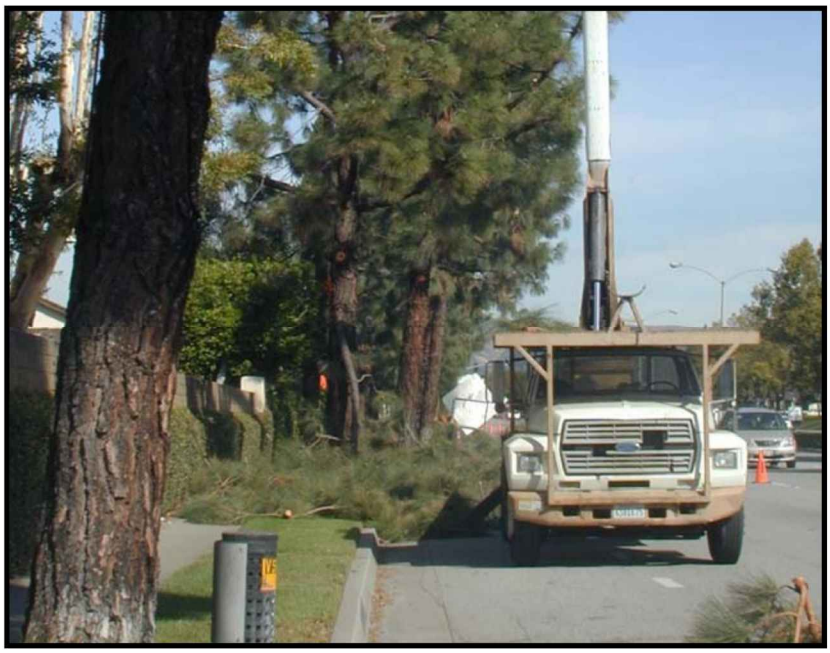
Orange County Stormwater Program
http://www.ocwatersheds.com/stormwater/swp_introduction.asp

Santa Clara Valley Urban Runoff Pollution Prevention Program. 1997 Urban Runoff Management Plan. September 1997, updated October 2000.

Santa Clara Valley Urban Runoff Pollution Prevention Program. Maintenance Best Management Practices for the Construction Industry. Brochures: Landscaping, Gardening, and Pool; Roadwork and Paving; and Fresh Concrete and Mortar Application. June 2001.

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Plan. 2001. Municipal Activities Model Program Guidance. November.

Landscape Maintenance SC-73



Objectives

- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	
Bacteria	
Oil and Grease	
Organics	
Oxygen Demanding	☑

Description

Landscape maintenance activities include vegetation removal; herbicide and insecticide application; fertilizer application; watering; and other gardening and lawn care practices. Vegetation control typically involves a combination of chemical (herbicide) application and mechanical methods. All of these maintenance practices have the potential to contribute pollutants to the storm drain system. The major objectives of this BMP are to minimize the discharge of pesticides, herbicides and fertilizers to the storm drain system and receiving waters; prevent the disposal of landscape waste into the storm drain system by collecting and properly disposing of clippings and cuttings, and educating employees and the public.

Approach

Pollution Prevention

- Implement an integrated pest management (IPM) program. IPM is a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools.
- Choose low water using flowers, trees, shrubs, and groundcover.
- Consider alternative landscaping techniques such as naturescaping and xeriscaping.
- Conduct appropriate maintenance (i.e. properly timed fertilizing, weeding, pest control, and pruning) to help preserve the landscapes water efficiency.

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- Consider grass cycling (grass cycling is the natural recycling of grass by leaving the clippings on the lawn when mowing. Grass clippings decompose quickly and release valuable nutrients back into the lawn).

Suggested Protocols

Mowing, Trimming, and Weeding

- Whenever possible use mechanical methods of vegetation removal (e.g mowing with tractor-type or push mowers, hand cutting with gas or electric powered weed trimmers) rather than applying herbicides. Use hand weeding where practical.
- Avoid loosening the soil when conducting mechanical or manual weed control, this could lead to erosion. Use mulch or other erosion control measures when soils are exposed.
- Performing mowing at optimal times. Mowing should not be performed if significant rain events are predicted.
- Mulching mowers may be recommended for certain flat areas. Other techniques may be employed to minimize mowing such as selective vegetative planting using low maintenance grasses and shrubs.
- Collect lawn and garden clippings, pruning waste, tree trimmings, and weeds. Chip if necessary, and compost or dispose of at a landfill (see waste management section of this fact sheet).
- Place temporarily stockpiled material away from watercourses, and berm or cover stockpiles to prevent material releases to storm drains.

Planting

- Determine existing native vegetation features (location, species, size, function, importance) and consider the feasibility of protecting them. Consider elements such as their effect on drainage and erosion, hardiness, maintenance requirements, and possible conflicts between preserving vegetation and the resulting maintenance needs.
- Retain and/or plant selected native vegetation whose features are determined to be beneficial, where feasible. Native vegetation usually requires less maintenance (e.g., irrigation, fertilizer) than planting new vegetation.
- Consider using low water use groundcovers when planting or replanting.

Waste Management

- Compost leaves, sticks, or other collected vegetation or dispose of at a permitted landfill. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Place temporarily stockpiled material away from watercourses and storm drain inlets, and berm or cover stockpiles to prevent material releases to the storm drain system.
- Reduce the use of high nitrogen fertilizers that produce excess growth requiring more frequent mowing or trimming.

- Avoid landscape wastes in and around storm drain inlets by either using bagging equipment or by manually picking up the material.

Irrigation

- Where practical, use automatic timers to minimize runoff.
- Use popup sprinkler heads in areas with a lot of activity or where there is a chance the pipes may be broken. Consider the use of mechanisms that reduce water flow to sprinkler heads if broken.
- Ensure that there is no runoff from the landscaped area(s) if re-claimed water is used for irrigation.
- If bailing of muddy water is required (e.g. when repairing a water line leak), do not put it in the storm drain; pour over landscaped areas.
- Irrigate slowly or pulse irrigate to prevent runoff and then only irrigate as much as is needed.
- Apply water at rates that do not exceed the infiltration rate of the soil.

Fertilizer and Pesticide Management

- Utilize a comprehensive management system that incorporates integrated pest management (IPM) techniques. There are many methods and types of IPM, including the following:
  - Mulching can be used to prevent weeds where turf is absent, fencing installed to keep rodents out, and netting used to keep birds and insects away from leaves and fruit.
  - Visible insects can be removed by hand (with gloves or tweezers) and placed in soapy water or vegetable oil. Alternatively, insects can be sprayed off the plant with water or in some cases vacuumed off of larger plants.
  - Store-bought traps, such as species-specific, pheromone-based traps or colored sticky cards, can be used.
  - Slugs can be trapped in small cups filled with beer that are set in the ground so the slugs can get in easily.
  - In cases where microscopic parasites, such as bacteria and fungi, are causing damage to plants, the affected plant material can be removed and disposed of (pruning equipment should be disinfected with bleach to prevent spreading the disease organism).
  - Small mammals and birds can be excluded using fences, netting, tree trunk guards.
  - Beneficial organisms, such as bats, birds, green lacewings, ladybugs, praying mantis, ground beetles, parasitic nematodes, trichogramma wasps, seed head weevils, and spiders that prey on detrimental pest species can be promoted.
- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides and training of applicators and pest control advisors.

- Use pesticides only if there is an actual pest problem (not on a regular preventative schedule).
- Do not use pesticides if rain is expected. Apply pesticides only when wind speeds are low (less than 5 mph).
- Do not mix or prepare pesticides for application near storm drains.
- Prepare the minimum amount of pesticide needed for the job and use the lowest rate that will effectively control the pest.
- Employ techniques to minimize off-target application (e.g. spray drift) of pesticides, including consideration of alternative application techniques.
- Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface.
- Calibrate fertilizer and pesticide application equipment to avoid excessive application.
- Periodically test soils for determining proper fertilizer use.
- Sweep pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water.
- Purchase only the amount of pesticide that you can reasonably use in a given time period (month or year depending on the product).
- Triple rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
- Dispose of empty pesticide containers according to the instructions on the container label.

Inspection

- Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering, and repair leaks in the irrigation system as soon as they are observed.
- Inspect pesticide/fertilizer equipment and transportation vehicles daily.

Training

- Educate and train employees on use of pesticides and in pesticide application techniques to prevent pollution. Pesticide application must be under the supervision of a California qualified pesticide applicator.
- Train/encourage municipal maintenance crews to use IPM techniques for managing public green areas.
- Annually train employees within departments responsible for pesticide application on the appropriate portions of the agency's IPM Policy, SOPs, and BMPs, and the latest IPM techniques.

- Employees who are not authorized and trained to apply pesticides should be periodically (at least annually) informed that they cannot use over-the-counter pesticides in or around the workplace.
- Use a training log or similar method to document training.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup
- Have spill cleanup materials readily available and in a know in location
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- The Federal Pesticide, Fungicide, and Rodenticide Act and California Title 3, Division 6, Pesticides and Pest Control Operations place strict controls over pesticide application and handling and specify training, annual refresher, and testing requirements. The regulations generally cover: a list of approved pesticides and selected uses, updated regularly; general application information; equipment use and maintenance procedures; and record keeping. The California Department of Pesticide Regulations and the County Agricultural Commission coordinate and maintain the licensing and certification programs. All public agency employees who apply pesticides and herbicides in "agricultural use" areas such as parks, golf courses, rights-of-way and recreation areas should be properly certified in accordance with state regulations. Contracts for landscape maintenance should include similar requirements.
- All employees who handle pesticides should be familiar with the most recent material safety data sheet (MSDS) files.
- Municipalities do not have the authority to regulate the use of pesticides by school districts, however the California Healthy Schools Act of 2000 (AB 2260) has imposed requirements on California school districts regarding pesticide use in schools. Posting of notification prior to the application of pesticides is now required, and IPM is stated as the preferred approach to pest management in schools.

Requirements

Costs

Additional training of municipal employees will be required to address IPM techniques and BMPs. IPM methods will likely increase labor cost for pest control which may be offset by lower chemical costs.

Maintenance

Not applicable

Supplemental Information

Further Detail of the BMP

Waste Management

Composting is one of the better disposal alternatives if locally available. Most municipalities either have or are planning yard waste composting facilities as a means of reducing the amount of waste going to the landfill. Lawn clippings from municipal maintenance programs as well as private sources would probably be compatible with most composting facilities

Contractors and Other Pesticide Users

Municipal agencies should develop and implement a process to ensure that any contractor employed to conduct pest control and pesticide application on municipal property engages in pest control methods consistent with the IPM Policy adopted by the agency. Specifically, municipalities should require contractors to follow the agency's IPM policy, SOPs, and BMPs; provide evidence to the agency of having received training on current IPM techniques when feasible; provide documentation of pesticide use on agency property to the agency in a timely manner.

References and Resources

King County Stormwater Pollution Control Manual. Best Management Practices for Businesses. 1995. King County Surface Water Management. July. On-line: http://dnr.metrokc.gov/wlr/dss/spcm.htm

Los Angeles County Stormwater Quality Model Programs. Public Agency Activities http://ladpw.org/wmd/npdes/model_links.cfm

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities. Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality Control Board. July. 1998.

Orange County Stormwater Program http://www.ocwatersheds.com/StormWater/swp_introduction.asp

Santa Clara Valley Urban Runoff Pollution Prevention Program. 1997 Urban Runoff Management Plan. September 1997, updated October 2000.

United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Landscaping and Lawn Care. Office of Water. Office of Wastewater Management. On-line: http://www.epa.gov/npdes/menuofbmps/poll_8.htm

Drainage System Maintenance SC-74



Photo Credit: Geoff Brosseau

Objectives

- Contain
- Educate
- Reduce/Minimize

Description

As a consequence of its function, the stormwater conveyance system collects and transports urban runoff that may contain certain pollutants. Maintaining catch basins, stormwater inlets, and other stormwater conveyance structures on a regular basis will remove pollutants, prevent clogging of the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system functions properly hydraulically to avoid flooding.

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Approach

Suggested Protocols

Catch Basins/Inlet Structures

- Municipal staff should regularly inspect facilities to ensure the following:
  - Immediate repair of any deterioration threatening structural integrity.
  - Cleaning before the sump is 40% full. Catch basins should be cleaned as frequently as needed to meet this standard.
  - Stenciling of catch basins and inlets (see SC-75 Waste Handling and Disposal).
- Clean catch basins, storm drain inlets, and other conveyance structures in high pollutant load areas just before the wet season to remove sediments and debris accumulated during the summer.

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- Conduct inspections more frequently during the wet season for problem areas where sediment or trash accumulates more often. Clean and repair as needed.
- Keep accurate logs of the number of catch basins cleaned.
- Record the amount of waste collected.
- Store wastes collected from cleaning activities of the drainage system in appropriate containers or temporary storage sites in a manner that prevents discharge to the storm drain.
- Dewater the wastes with outflow into the sanitary sewer if permitted. Water should be treated with an appropriate filtering device prior to discharge to the sanitary sewer. If discharge to the sanitary sewer is not allowed, water should be pumped or vacuumed to a tank and properly disposed of. Do not dewater near a storm drain or stream.
- Except for small communities with relatively few catch basins that may be cleaned manually, most municipalities will require mechanical cleaners such as eductors, vacuums, or bucket loaders.

Storm Drain Conveyance System

- Locate reaches of storm drain with deposit problems and develop a flushing schedule that keeps the pipe clear of excessive buildup.
- Collect flushed effluent and pump to the sanitary sewer for treatment.

Pump Stations

- Clean all storm drain pump stations prior to the wet season to remove silt and trash.
- Do not allow discharge from cleaning a storm drain pump station or other facility to reach the storm drain system.
- Conduct quarterly routine maintenance at each pump station.
- Inspect, clean, and repair as necessary all outlet structures prior to the wet season.
- Sample collected sediments to determine if landfill disposal is possible, or illegal discharges in the watershed are occurring.

Open Channel

- Consider modification of storm channel characteristics to improve channel hydraulics, to increase pollutant removals, and to enhance channel/creek aesthetic and habitat value.
- Conduct channel modification/improvement in accordance with existing laws. Any person, government agency, or public utility proposing an activity that will change the natural (emphasis added) state of any river, stream, or lake in California, must enter into a steam or Lake Alteration Agreement with the Department of Fish and Game. The developer-applicant should also contact local governments (city, county, special districts), other state agencies

(SWRCB, RWQCB, Department of Forestry, Department of Water Resources), and Federal Corps of Engineers and USFWS

Illicit Connections and Discharges

- During routine maintenance of conveyance system and drainage structures field staff should look for evidence of illegal discharges or illicit connections:
  - Is there evidence of spills such as paints, discoloring, etc.
  - Are there any odors associated with the drainage system
  - Record locations of apparent illegal discharges/illicit connections
  - Track flows back to potential dischargers and conduct aboveground inspections. This can be done through visual inspection of up gradient manholes or alternate techniques including zinc chloride smoke testing, fluorometric dye testing, physical inspection testing, or television camera inspection.
  - Once the origin of flow is established, require illicit discharger to eliminate the discharge.
- Stencil storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

Illegal Dumping

- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs.
- Establish a system for tracking incidents. The system should be designed to identify the following:
  - Illegal dumping hot spots
  - Types and quantities (in some cases) of wastes
  - Patterns in time of occurrence (time of day/night, month, or year)
  - Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
  - Responsible parties
- Post "No Dumping" signs in problem areas with a phone number for reporting dumping and disposal. Signs should also indicate fines and penalties for illegal dumping.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

- The State Department of Fish and Game has a hotline for reporting violations called Cal TIP (1-800-952-5400). The phone number may be used to report any violation of a Fish and Game code (illegal dumping, poaching, etc.).
- The California Department of Toxic Substances Control's Waste Alert Hotline, 1-800-69TOXIC, can be used to report hazardous waste violations.

Training

- Train crews in proper maintenance activities, including record keeping and disposal.
- Only properly trained individuals are allowed to handle hazardous materials/wastes.
- Train municipal employees from all departments (public works, utilities, street cleaning, parks and recreation, industrial waste inspection, hazardous waste inspection, sewer maintenance) to recognize and report illegal dumping.
- Train municipal employees and educate businesses, contractors, and the general public in proper and consistent methods for disposal.
- Train municipal staff regarding non-stormwater discharges (See SC-10 Non-Stormwater Discharges).

Spill Response and Prevention

- Refer to SC-11, Prevention, Control & Cleanup
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- Cleanup activities may create a slight disturbance for local aquatic species. Access to items and material on private property may be limited. Trade-offs may exist between channel hydraulics and water quality/riparian habitat. If storm channels or basins are recognized as wetlands, many activities, including maintenance, may be subject to regulation and permitting.
- Storm drain flushing is most effective in small diameter pipes (36-inch diameter pipe or less, depending on water supply and sediment collection capacity). Other considerations associated with storm drain flushing may include the availability of a water source, finding a downstream area to collect sediments, liquid/sediment disposal, and disposal of flushed effluent to sanitary sewer may be prohibited in some areas.
- Regulations may include adoption of substantial penalties for illegal dumping and disposal.
- Municipal codes should include sections prohibiting the discharge of soil, debris, refuse, hazardous wastes, and other pollutants into the storm drain system.
- Private property access rights may be needed to track illegal discharges up gradient.

- Requirements of municipal ordinance authority for suspected source verification testing for illicit connections necessary for guaranteed rights of entry.

Requirements

Costs

- An aggressive catch basin cleaning program could require a significant capital and O&M budget. A careful study of cleaning effectiveness should be undertaken before increased cleaning is implemented. Catch basin cleaning costs are less expensive if vacuum street sweepers are available; cleaning catch basins manually can cost approximately twice as much as cleaning the basins with a vacuum attached to a sweeper.

- Methods used for illicit connection detection (smoke testing, dye testing, visual inspection, and flow monitoring) can be costly and time-consuming. Site-specific factors, such as the level of impervious area, the density and ages of buildings, and type of land use will determine the level of investigation necessary. Encouraging reporting of illicit discharges by employees can offset costs by saving expense on inspectors and directing resources more efficiently. Some programs have used funds available from "environmental fees" or special assessment districts to fund their illicit connection elimination programs.

Maintenance

- Two-person teams may be required to clean catch basins with vactor trucks.

- Identifying illicit discharges requires teams of at least two people (volunteers can be used), plus administrative personnel, depending on the complexity of the storm sewer system.

- Arrangements must be made for proper disposal of collected wastes.

- Requires technical staff to detect and investigate illegal dumping violations, and to coordinate public education.

Supplemental Information

Further Detail of the BMP

Storm Drain flushing

Sanitary sewer flushing is a common maintenance activity used to improve pipe hydraulics and to remove pollutants in sanitary sewer systems. The same principles that make sanitary sewer flushing effective can be used to flush storm drains. Flushing may be designed to hydraulically convey accumulated material to strategic locations, such as to an open channel, to another point where flushing will be initiated, or over to the sanitary sewer and on to the treatment facilities, thus preventing re-suspension and overflow of a portion of the solids during storm events. Flushing prevents "plug flow" discharges of concentrated pollutant loadings and sediments. The deposits can hinder the designed conveyance capacity of the storm drain system and potentially cause backwater conditions in severe cases of clogging.

Storm drain flushing usually takes place along segments of pipe with grades that are too flat to maintain adequate velocity to keep particles in suspension. An upstream manhole is selected to place an inflatable device that temporarily plugs the pipe. Further upstream, water is pumped into the line to create a flushing wave. When the upstream reach of pipe is sufficiently full to

cause a flushing wave, the inflated device is rapidly deflated with the assistance of a vacuum pump, releasing the backed up water and resulting in the cleaning of the storm drain segment.

To further reduce the impacts of stormwater pollution, a second inflatable device, placed well downstream, may be used to re-collect the water after the force of the flushing wave has dissipated. A pump may then be used to transfer the water and accumulated material to the sanitary sewer for treatment. In some cases, an interceptor structure may be more practical or required to re-collect the flushed waters.

It has been found that cleansing efficiency of periodic flush waves is dependent upon flush volume, flush discharge rate, sewer slope, sewer length, sewer flow rate, sewer diameter, and population density. As a rule of thumb, the length of line to be flushed should not exceed 700 feet. At this maximum recommended length, the percent removal efficiency ranges between 65-75 percent for organics and 55-65 percent for dry weather grit/inorganic material. The percent removal efficiency drops rapidly beyond that. Water is commonly supplied by a water truck, but fire hydrants can also supply water. To make the best use of water, it is recommended that reclaimed water be used or that fire hydrant line flushing coincide with storm drain flushing.

Flow Management

Flow management has been one of the principal motivations for designing urban stream corridors in the past. Such needs may or may not be compatible with the stormwater quality goals in the stream corridor.

Downstream flood peaks can be suppressed by reducing through flow velocity. This can be accomplished by reducing gradient with grade control structures or increasing roughness with boulders, dense vegetation, or complex banks forms. Reducing velocity correspondingly increases flood height, so all such measures have a natural association with floodplain open space. Flood elevations laterally adjacent to the stream can be lowered by increasing through flow velocity.

However, increasing velocity increases flooding downstream and inherently conflicts with channel stability and human safety. Where topography permits, another way to lower flood elevation is to lower the level of the floodway with drop structures into a large but subtly excavated bowl where flood flows we allowed to spread out.

Stream Corridor Planning

Urban streams receive and convey stormwater flows from developed or developing watersheds. Planning of stream corridors thus interacts with urban stormwater management programs. If local programs are intended to control or protect downstream environments by managing flows delivered to the channels, then it is logical that such programs should be supplemented by management of the materials, forms, and uses of the downstream riparian corridor. Any proposal for steam alteration or management should be investigated for its potential flow and stability effects on upstream, downstream, and laterally adjacent areas. The timing and rate of flow from various tributaries can combine in complex ways to alter flood hazards. Each section of channel is unique, influenced by its own distribution of roughness elements, management activities, and stream responses.

Flexibility to adapt to stream features and behaviors as they evolve must be included in stream reclamation planning. The amenity and ecology of streams may be enhanced through the landscape design options of 1) corridor reservation, 2) bank treatment, 3) geomorphic restoration, and 4) grade control.

Corridor reservation - Reserving stream corridors and valleys to accommodate natural stream meandering, aggradation, degradation, and over bank flows allows streams to find their own form and generate less ongoing erosion. In California, open stream corridors in recent urban developments have produced recreational open space, irrigation of streamside plantings, and the aesthetic amenity of flowing water.

Bank treatment - The use of armoring, vegetative cover, and flow deflection may be used to influence a channel's form, stability, and biotic habitat. To prevent bank erosion, armoring can be done with rigid construction materials, such as concrete, masonry, wood planks and logs, riprap, and gabions. Concrete linings have been criticized because of their lack of provision of biotic habitat. In contrast, riprap and gabions make relatively porous and flexible linings. Boulders, placed in the bed reduce velocity and erosive power.

Riparian vegetation can stabilize the banks of streams that are at or near a condition of equilibrium. Binding networks of roots increase bank shear strength. During flood flows, resilient vegetation is forced into erosion-inhibiting mats. The roughness of vegetation leads to lower velocity, further reducing erosive effects. Structural flow deflection can protect banks from erosion or alter fish habitat. By concentrating flow, a deflector causes a pool to be scoured in the bed.

Geomorphic restoration – Restoration refers to alteration of disturbed streams so their form and behavior emulate those of undisturbed streams. Natural meanders are retained, with grading to gentle slopes on the inside of curves to allow point bars and riffle-pool sequences to develop. Trees are retained to provide scenic quality, biotic productivity, and roots for bank stabilization, supplemented by plantings where necessary.

A restorative approach can be successful where the stream is already approaching equilibrium. However, if upstream urbanization continues new flow regimes will be generated that could disrupt the equilibrium of the treated system.

Grade Control - A grade control structure is a level shelf of a permanent material, such as stone, masonry, or concrete, over which stream water flows. A grade control structure is called a sill, weir, or drop structure, depending on the relation of its invert elevation to upstream and downstream channels.

A sill is installed at the preexisting channel bed elevation to prevent upstream migration of nick points. It establishes a firm base level below which the upstream channel can not erode.

A weir or check dam is installed with invert above the preexisting bed elevation. A weir raises the local base level of the stream and causes aggradation upstream. The gradient, velocity, and erosive potential of the stream channel are reduced. A drop structure lowers the downstream invert below its preexisting elevation, reducing downstream gradient and velocity. Weirs and drop structure control erosion by dissipating energy and reducing slope velocity.

When carefully applied, grade control structures can be highly versatile in establishing human and environmental benefits in stabilized channels. To be successful, application of grade control structures should be guided by analysis of the stream system both upstream and downstream from the area to he reclaimed.

Examples

The California Department of Water Resources began the Urban Stream Restoration Program in 1985. The program provides grant funds to municipalities and community groups to implement stream restoration projects. The projects reduce damages from streambank aid watershed instability arid floods while restoring streams' aesthetic, recreational, and fish and wildlife values.

In Buena Vista Park, upper floodway slopes are gentle and grassed to achieve continuity of usable park land across the channel of small boulders at the base of the slopes.

The San Diego River is a large, vegetative lined channel, which was planted in a variety of species to support riparian wildlife while stabilizing the steep banks of the floodway.

References and Resources

Ferguson, B.K. 1991. Urban Stream Reclamation, p. 324-322, Journal of Soil and Water Conservation.

Los Angeles County Stormwater Quality. Public Agency Activities Model Program. On-line: http://ladpw.org/wmd/npdes/public_TC.cfm

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities. Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality Control Board. July. 1998.

Orange County Stormwater Program
http://www.ocwatersheds.com/StormWater/swp_introduction.asp

Santa Clara Valley Urban Runoff Pollution Prevention Program. 1997 Urban Runoff Management Plan. September 1997, updated October 2000.

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Program (URMP) Municipal Activities Model Program Guidance. 2001. Project Clean Water. November.

United States Environmental Protection Agency (USEPA). 1999. Stormwater Management Fact Sheet Non-stormwater Discharges to Storm Sewers. EPA 832-F-99-022. Office of Water, Washington, D.C. September.

United States Environmental Protection Agency (USEPA). 1999. Stormwater O&M Fact Sheet Catch Basin Cleaning. EPA 832-F-99-011. Office of Water, Washington, D.C. September.

United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Illegal Dumping Control. On line: http://www.epa.gov/npdes/menuofbmps/poll_7.htm

United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Storm Drain System Cleaning. On line: http://www.epa.gov/npdes/menuofbmps/poll_16.htm

Site Design & Landscape Planning SD-10



Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- ☑ Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Each project site possesses unique topographic, hydrologic, and vegetative features, some of which are more suitable for development than others. Integrating and incorporating appropriate landscape planning methodologies into the project design is the most effective action that can be done to minimize surface and groundwater contamination from stormwater.

Approach

Landscape planning should couple consideration of land suitability for urban uses with consideration of community goals and projected growth. Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment.

Design Considerations

Design requirements for site design and landscapes planning should conform to applicable standards and specifications of agencies with jurisdiction and be consistent with applicable General Plan and Local Area Plan policies.

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Designing New Installations

Begin the development of a plan for the landscape unit with attention to the following general principles:

- Formulate the plan on the basis of clearly articulated community goals. Carefully identify conflicts and choices between retaining and protecting desired resources and community growth.

- Map and assess land suitability for urban uses. Include the following landscape features in the assessment: wooded land, open unwooded land, steep slopes, erosion-prone soils, foundation suitability, soil suitability for waste disposal, aquifers, aquifer recharge areas, wetlands, floodplains, surface waters, agricultural lands, and various categories of urban land use. When appropriate, the assessment can highlight outstanding local or regional resources that the community determines should be protected (e.g., a scenic area, recreational area, threatened species habitat, farmland, fish run). Mapping and assessment should recognize not only these resources but also additional areas needed for their sustenance.

Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Conserve Natural Areas during Landscape Planning

If applicable, the following items are required and must be implemented in the site layout during the subdivision design and approval process, consistent with applicable General Plan and Local Area Plan policies:

- Cluster development on least-sensitive portions of a site while leaving the remaining land in a natural undisturbed condition.

- Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection.

- Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants.

- Promote natural vegetation by using parking lot islands and other landscaped areas.

- Preserve riparian areas and wetlands.

Maximize Natural Water Storage and Infiltration Opportunities Within the Landscape Unit

- Promote the conservation of forest cover. Building on land that is already deforested affects basin hydrology to a lesser extent than converting forested land. Loss of forest cover reduces interception storage, detention in the organic forest floor layer, and water losses by evapotranspiration, resulting in large peak runoff increases and either their negative effects or the expense of countering them with structural solutions.

- Maintain natural storage reservoirs and drainage corridors, including depressions, areas of permeable soils, swales, and intermittent streams. Develop and implement policies and

regulations to discourage the clearing, filling, and channelization of these features. Utilize them in drainage networks in preference to pipes, culverts, and engineered ditches.

- Evaluating infiltration opportunities by referring to the stormwater management manual for the jurisdiction and pay particular attention to the selection criteria for avoiding groundwater contamination, poor soils, and hydrogeological conditions that cause these facilities to fail. If necessary, locate developments with large amounts of impervious surfaces or a potential to produce relatively contaminated runoff away from groundwater recharge areas.

Protection of Slopes and Channels during Landscape Design

- Convey runoff safely from the tops of slopes.
- Avoid disturbing steep or unstable slopes.
- Avoid disturbing natural channels.
- Stabilize disturbed slopes as quickly as possible.
- Vegetate slopes with native or drought tolerant vegetation.
- Control and treat flows in landscaping and/or other controls prior to reaching existing natural drainage systems.
- Stabilize temporary and permanent channel crossings as quickly as possible, and ensure that increases in run-off velocity and frequency caused by the project do not erode the channel.
- Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion. Energy dissipaters shall be installed in such a way as to minimize impacts to receiving waters.
- Line on-site conveyance channels where appropriate, to reduce erosion caused by increased flow velocity due to increases in tributary impervious area. The first choice for linings should be grass or some other vegetative surface, since these materials not only reduce runoff velocities, but also provide water quality benefits from filtration and infiltration. If velocities in the channel are high enough to erode grass or other vegetative linings, riprap, concrete, soil cement, or geo-grid stabilization are other alternatives.
- Consider other design principles that are comparable and equally effective.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define “redevelopment” in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of “ redevelopment” must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under “designing new installations” above should be followed.

Redevelopment may present significant opportunity to add features which had not previously been implemented. Examples include incorporation of depressions, areas of permeable soils, and swales in newly redeveloped areas. While some site constraints may exist due to the status of already existing infrastructure, opportunities should not be missed to maximize infiltration, slow runoff, reduce impervious areas, disconnect directly connected impervious areas.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Stormwater Management Manual for Western Washington, Washington State Department of Ecology, August 2001.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Roof Runoff Controls SD-11



Rain Garden

Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- Collect and Convey

Description

Various roof runoff controls are available to address stormwater that drains off rooftops. The objective is to reduce the total volume and rate of runoff from individual lots, and retain the pollutants on site that may be picked up from roofing materials and atmospheric deposition. Roof runoff controls consist of directing the roof runoff away from paved areas and mitigating flow to the storm drain system through one of several general approaches: cisterns or rain barrels; dry wells or infiltration trenches; pop-up emitters, and foundation planting. The first three approaches require the roof runoff to be contained in a gutter and downspout system. Foundation planting provides a vegetated strip under the drip line of the roof.

Approach

Design of individual lots for single-family homes as well as lots for higher density residential and commercial structures should consider site design provisions for containing and infiltrating roof runoff or directing roof runoff to vegetative swales or buffer areas. Retained water can be reused for watering gardens, lawns, and trees. Benefits to the environment include reduced demand for potable water used for irrigation, improved stormwater quality, increased groundwater recharge, decreased runoff volume and peak flows, and decreased flooding potential.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment.

Design Considerations

Designing New Installations

Cisterns or Rain Barrels

One method of addressing roof runoff is to direct roof downspouts to cisterns or rain barrels. A cistern is an above ground storage vessel with either a manually operated valve or a permanently open outlet. Roof runoff is temporarily stored and then released for irrigation or infiltration between storms. The number of rain

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barrels needed is a function of the rooftop area. Some low impact developers recommend that every house have at least 2 rain barrels, with a minimum storage capacity of 1000 liters. Roof barrels serve several purposes including mitigating the first flush from the roof which has a high volume, amount of contaminants, and thermal load. Several types of rain barrels are commercially available. Consideration must be given to selecting rain barrels that are vector proof and childproof. In addition, some barrels are designed with a bypass valve that filters out grit and other contaminants and routes overflow to a soak-away pit or rain garden.

If the cistern has an operable valve, the valve can be closed to store stormwater for irrigation or infiltration between storms. This system requires continual monitoring by the resident or grounds crews, but provides greater flexibility in water storage and metering. If a cistern is provided with an operable valve and water is stored inside for long periods, the cistern must be covered to prevent mosquitoes from breeding.

A cistern system with a permanently open outlet can also provide for metering stormwater runoff. If the cistern outlet is significantly smaller than the size of the downspout inlet (say ¼ to ½ inch diameter), runoff will build up inside the cistern during storms, and will empty out slowly after peak intensities subside. This is a feasible way to mitigate the peak flow increases caused by rooftop impervious land coverage, especially for the frequent, small storms.

Dry wells and Infiltration Trenches

Roof downspouts can be directed to dry wells or infiltration trenches. A dry well is constructed by excavating a hole in the ground and filling it with an open graded aggregate, and allowing the water to fill the dry well and infiltrate after the storm event. An underground connection from the downspout conveys water into the dry well, allowing it to be stored in the voids. To minimize sedimentation from lateral soil movement, the sides and top of the stone storage matrix can be wrapped in a permeable filter fabric, though the bottom may remain open. A perforated observation pipe can be inserted vertically into the dry well to allow for inspection and maintenance.

In practice, dry wells receiving runoff from single roof downspouts have been successful over long periods because they contain very little sediment. They must be sized according to the amount of rooftop runoff received, but are typically 4 to 5 feet square, and 2 to 3 feet deep, with a minimum of 1-foot soil cover over the top (maximum depth of 10 feet).

To protect the foundation, dry wells must be set away from the building at least 10 feet. They must be installed in solids that accommodate infiltration. In poorly drained soils, dry wells have very limited feasibility.

Infiltration trenches function in a similar manner and would be particularly effective for larger roof areas. An infiltration trench is a long, narrow, rock-filled trench with no outlet that receives stormwater runoff. These are described under Treatment Controls.

Pop-up Drainage Emitter

Roof downspouts can be directed to an underground pipe that daylights some distance from the building foundation, releasing the roof runoff through a pop-up emitter. Similar to a pop-up irrigation head, the emitter only opens when there is flow from the roof. The emitter remains flush to the ground during dry periods, for ease of lawn or landscape maintenance.

Foundation Planting

Landscape planting can be provided around the base to allow increased opportunities for stormwater infiltration and protect the soil from erosion caused by concentrated sheet flow coming off the roof. Foundation plantings can reduce the physical impact of water on the soil and provide a subsurface matrix of roots that encourage infiltration. These plantings must be sturdy enough to tolerate the heavy runoff sheet flows, and periodic soil saturation.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Supplemental Information

Examples

- City of Ottawa's Water Links Surface –Water Quality Protection Program
- City of Toronto Downspout Disconnection Program
- City of Boston, MA, Rain Barrel Demonstration Program

Other Resources

Hager, Marty Catherine, Stormwater, "Low-Impact Development", January/February 2003. www.stormh2o.com

Low Impact Urban Design Tools, Low Impact Development Design Center, Beltsville, MD. www.lid-stormwater.net

Start at the Source, Bay Area Stormwater Management Agencies Association, 1999 Edition

Efficient Irrigation SD-12



Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Irrigation water provided to landscaped areas may result in excess irrigation water being conveyed into stormwater drainage systems.

Approach

Project plan designs for development and redevelopment should include application methods of irrigation water that minimize runoff of excess irrigation water into the stormwater conveyance system.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Designing New Installations

The following methods to reduce excessive irrigation runoff should be considered, and incorporated and implemented where determined applicable and feasible by the Permittee:

- Employ rain-triggered shutoff devices to prevent irrigation after precipitation.
- Design irrigation systems to each landscape area's specific water requirements.
- Include design featuring flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines.
- Implement landscape plans consistent with County or City water conservation resolutions, which may include provision of water sensors, programmable irrigation times (for short cycles), etc.

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- Design timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water drainage system.
- Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. Choose plants with low irrigation requirements (for example, native or drought tolerant species). Consider design features such as:
  - Using mulches (such as wood chips or bar) in planter areas without ground cover to minimize sediment in runoff
  - Installing appropriate plant materials for the location, in accordance with amount of sunlight and climate, and use native plant materials where possible and/or as recommended by the landscape architect
  - Leaving a vegetative barrier along the property boundary and interior watercourses, to act as a pollutant filter, where appropriate and feasible
  - Choosing plants that minimize or eliminate the use of fertilizer or pesticides to sustain growth
- Employ other comparable, equally effective methods to reduce irrigation water runoff.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Storm Drain Signage SD-13



Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- ☑ Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Waste materials dumped into storm drain inlets can have severe impacts on receiving and ground waters. Posting notices regarding discharge prohibitions at storm drain inlets can prevent waste dumping. Storm drain signs and stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets.

Approach

The stencil or affixed sign contains a brief statement that prohibits dumping of improper materials into the urban runoff conveyance system. Storm drain messages have become a popular method of alerting the public about the effects of and the prohibitions against waste disposal.

Suitable Applications

Stencils and signs alert the public to the destination of pollutants discharged to the storm drain. Signs are appropriate in residential, commercial, and industrial areas, as well as any other area where contributions or dumping to storm drains is likely.

Design Considerations

Storm drain message markers or placards are recommended at all storm drain inlets within the boundary of a development project. The marker should be placed in clear sight facing toward anyone approaching the inlet from either side. All storm drain inlet locations should be identified on the development site map.

Designing New Installations

The following methods should be considered for inclusion in the project design and show on project plans:

- Provide stenciling or labeling of all storm drain inlets and catch basins, constructed or modified, within the project area with prohibitive language. Examples include “NO DUMPING

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– DRAINS TO OCEAN" and/or other graphical icons to discourage illegal dumping.

- Post signs with prohibitive language and/or graphical icons, which prohibit illegal dumping at public access points along channels and creeks within the project area.

Note - Some local agencies have approved specific signage and/or storm drain message placards for use. Consult local agency stormwater staff to determine specific requirements for placard types and methods of application.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. If the project meets the definition of "redevelopment", then the requirements stated under " designing new installations" above should be included in all project design plans.

Additional Information

Maintenance Considerations

- Legibility of markers and signs should be maintained. If required by the agency with jurisdiction over the project, the owner/operator or homeowner's association should enter into a maintenance agreement with the agency or record a deed restriction upon the property title to maintain the legibility of placards or signs.

Placement

- Signage on top of curbs tends to weather and fade.

- Signage on face of curbs tends to be worn by contact with vehicle tires and sweeper brooms.

Supplemental Information

Examples

- Most MS4 programs have storm drain signage programs. Some MS4 programs will provide stencils, or arrange for volunteers to stencil storm drains as part of their outreach program.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Trash Storage Areas SD-32

Description

Trash storage areas are areas where a trash receptacle (s) are located for use as a repository for solid wastes. Stormwater runoff from areas where trash is stored or disposed of can be polluted. In addition, loose trash and debris can be easily transported by water or wind into nearby storm drain inlets, channels, and/or creeks. Waste handling operations that may be sources of stormwater pollution include dumpsters, litter control, and waste piles.

Approach

This fact sheet contains details on the specific measures required to prevent or reduce pollutants in stormwater runoff associated with trash storage and handling. Preventative measures including enclosures, containment structures, and impervious pavements to mitigate spills, should be used to reduce the likelihood of contamination.

Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- Collect and Convey

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Design requirements for waste handling areas are governed by Building and Fire Codes, and by current local agency ordinances and zoning requirements. The design criteria described in this fact sheet are meant to enhance and be consistent with these code and ordinance requirements. Hazardous waste should be handled in accordance with legal requirements established in Title 22, California Code of Regulation.

Wastes from commercial and industrial sites are typically hauled by either public or commercial carriers that may have design or access requirements for waste storage areas. The design criteria in this fact sheet are recommendations and are not intended to be in conflict with requirements established by the waste hauler. The waste hauler should be contacted prior to the design of your site trash collection areas. Conflicts or issues should be discussed with the local agency.

Designing New Installations

Trash storage areas should be designed to consider the following structural or treatment control BMPs:

- Design trash container areas so that drainage from adjoining roofs and pavement is diverted around the area(s) to avoid run-on. This might include berming or grading the waste handling area to prevent run-on of stormwater.
- Make sure trash container areas are screened or walled to prevent off-site transport of trash.

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- Use lined bins or dumpsters to reduce leaking of liquid waste.
- Provide roofs, awnings, or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers.
- Pave trash storage areas with an impervious surface to mitigate spills.
- Do not locate storm drains in immediate vicinity of the trash storage area.
- Post signs on all dumpsters informing users that hazardous materials are not to be disposed of therein.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Additional Information

Maintenance Considerations

The integrity of structural elements that are subject to damage (i.e., screens, covers, and signs) must be maintained by the owner/operator. Maintenance agreements between the local agency and the owner/operator may be required. Some agencies will require maintenance deed restrictions to be recorded of the property title. If required by the local agency, maintenance agreements or deed restrictions must be executed by the owner/operator before improvement plans are approved.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Vehicle Washing Areas SD-33

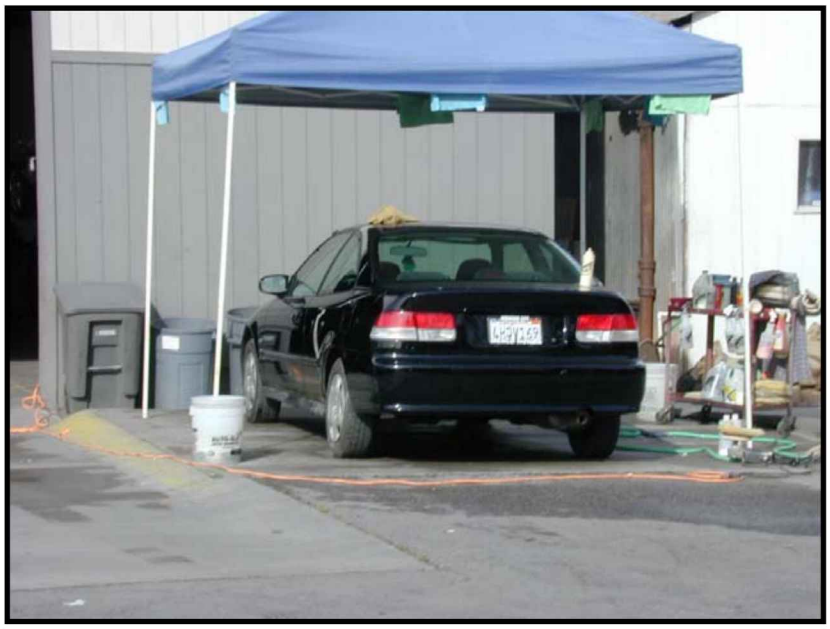

Photo Credit: Geoff Brosseau

Design Objectives

- ☑ Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- ☑ Collect and Convey

Description

Vehicle washing, equipment washing, and steam cleaning may contribute high concentrations of metals, oil and grease, solvents, phosphates, and suspended solids to wash waters that drain to stormwater conveyance systems.

Approach

Project plans should include appropriately designed area(s) for washing-steam cleaning of vehicles and equipment. Depending on the size and other parameters of the wastewater facility, wash water may be conveyed to a sewer, an infiltration system, recycling system or other alternative. Pretreatment may be required for conveyance to a sanitary sewer.

Suitable Applications

Appropriate applications include commercial developments, restaurants, retail gasoline outlets, automotive repair shops and others.

Design Considerations

Design requirements for vehicle maintenance are governed by Building and Fire Codes, and by current local agency ordinances, and zoning requirements. Design criteria described in this fact sheet are meant to enhance and be consistent with these code requirements.

Designing New Installations

Areas for washing/steam cleaning should incorporate one of the following features:

- Be self-contained and/or covered with a roof or overhang
- Be equipped with a clarifier or other pretreatment facility
- Have a proper connection to a sanitary sewer

- Include other features which are comparable and equally effective

CAR WASH AREAS - Some jurisdictions' stormwater management plans include vehicle-cleaning area source control design requirements for community car wash racks in complexes with a large number of dwelling units. In these cases, wash water from the areas may be directed to the sanitary sewer, to an engineered infiltration system, or to an equally effective alternative. Pre-treatment may also be required.

Depending on the jurisdiction, developers may be directed to divert surface water runoff away from the exposed area around the wash pad (parking lot, storage areas), and wash pad itself to alternatives other than the sanitary sewer. Roofing may be required for exposed wash pads.

It is generally advisable to cover areas used for regular washing of vehicles, trucks, or equipment, surround them with a perimeter berm, and clearly mark them as a designated washing area. Sumps or drain lines can be installed to collect wash water, which may be treated for reuse or recycling, or for discharge to the sanitary sewer. Jurisdictions may require some form of pretreatment, such as a trap, for these areas.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment.

Additional Information

Maintenance Considerations

Stormwater and non-stormwater will accumulate in containment areas and sumps with impervious surfaces. Contaminated accumulated water must be disposed of in accordance with applicable laws and cannot be discharged directly to the storm drain or sanitary sewer system without the appropriate permit.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Outdoor Material Storage Areas SD-34



Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutant
- Collect and Convey

Description

Proper design of outdoor storage areas for materials reduces opportunity for toxic compounds, oil and grease, heavy metals, nutrients, suspended solids, and other pollutants to enter the stormwater conveyance system. Materials may be in the form of raw products, by-products, finished products, and waste products. The type of pollutants associated with the materials will vary depending on the type of commercial or industrial activity.

Approach

Outdoor storage areas require a drainage approach different from the typical infiltration/detention strategy. In outdoor storage areas, infiltration is discouraged. Containment is encouraged. Preventative measures include enclosures, secondary containment structures and impervious surfaces.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment.

Design Considerations

Some materials are more of a concern than others. Toxic and hazardous materials must be prevented from coming in contact with stormwater. Non-toxic or non-hazardous materials do not have to be prevented from stormwater contact. However, these materials may have toxic effects on receiving waters if allowed to be discharged with stormwater in significant quantities. Accumulated material on an impervious surface could result in significant impact on the rivers or streams that receive the runoff.

Material may be stored in a variety of ways, including bulk piles, containers, shelving, stacking, and tanks. Stormwater contamination may be prevented by eliminating the possibility of stormwater contact with the material storage areas either through diversion, cover, or capture of the stormwater. Control measures may also include minimizing the storage area. Design

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requirements for material storage areas are governed by Building and Fire Codes, and by current City or County ordinances and zoning requirements. Control measures are site specific, and must meet local agency requirements.

Designing New Installations

Where proposed project plans include outdoor areas for storage of materials that may contribute pollutants to the stormwater conveyance system, the following structural or treatment BMPS should be considered:

- Materials with the potential to contaminate stormwater should be: (1) placed in an enclosure such as, but not limited to, a cabinet, shed, or similar structure that prevents contact with runoff or spillage to the stormwater conveyance system, or (2) protected by secondary containment structures such as berms, dikes, or curbs.
- The storage area should be paved and sufficiently impervious to contain leaks and spills.
- The storage area should slope towards a dead-end sump to contain spills and direct runoff from downspouts/roofs should be directed away from storage areas.
- The storage area should have a roof or awning that extends beyond the storage area to minimize collection of stormwater within the secondary containment area. A manufactured storage shed may be used for small containers.

Note that the location(s) of installations of where these preventative measures will be employed must be included on the map or plans identifying BMPs.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Additional Information

Stormwater and non-stormwater will accumulate in containment areas and sumps with impervious surfaces. Contaminated accumulated water must be disposed of in accordance with applicable laws and cannot be discharged directly to the storm drain or sanitary sewer system without the appropriate permits.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Outdoor Work Areas SD-35



Photo Credit: Geoff Brosseau

Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutant
- ☑ Collect and Convey

Description

Proper design of outdoor work areas for materials reduces opportunity for toxic compounds, oil and grease, heavy metals, nutrients, suspended solids, and other pollutants to enter the stormwater conveyance system.

Approach

Outdoor work areas require a drainage approach different from the typical infiltration/detention strategy. In outdoor work areas, infiltration is discouraged; collection and conveyance are encouraged. In outdoor work areas, infiltration is discouraged and runoff is often routed directly to the sanitary sewer, not the storm drain. Because this runoff is being added to the loads normally received by the wastewater treatment plants, municipal stormwater programs and/or private developers must work with the local plant to develop solutions that minimize effects on the treatment facility. These concerns are best addressed in the planning and design stage of the outdoor work area.

Suitable Applications

Appropriate applications include residential, commercial, and industrial areas planned for development or redevelopment.

Design Considerations

Design requirements for outdoor work areas are governed by Building and Fire Codes, and by current local agency ordinances, and zoning requirements.

Designing New Installations

Outdoor work areas can be designed in particular ways to reduce impacts on both stormwater quality and sewage treatment plants.

- Create an impermeable surface such as concrete or asphalt, or a prefabricated metal drip pan, depending on the use.

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- Cover the area with a roof. This prevents rain from falling on the work area and becoming polluted runoff.
- Berm or perform mounding around the perimeter of the area to prevent water from adjacent areas from flowing on to the surface of the work area.
- Directly connect runoff. Unlike other areas, runoff from work areas is directly connected to the sanitary sewer or other specialized containment system(s). This allows the more highly concentrated pollutants from these areas to receive special treatment that removes particular constituents. Approval for this connection must be obtained from the appropriate sanitary sewer agency.
- Locate the work area away from storm drains or catch basins.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Street Sweeping and Vacuuming SE-7



Description and Purpose

Street sweeping and vacuuming includes use of self-propelled and walk-behind equipment to remove sediment from streets and roadways, and to clean paved surfaces in preparation for final paving. Sweeping and vacuuming prevents sediment from the project site from entering storm drains or receiving waters.

Suitable Applications

Sweeping and vacuuming are suitable anywhere sediment is tracked from the project site onto public or private paved streets and roads, typically at points of egress. Sweeping and vacuuming are also applicable during preparation of paved surfaces for final paving.

Limitations

Sweeping and vacuuming may not be effective when sediment is wet or when tracked soil is caked (caked soil may need to be scraped loose).

Implementation

- Controlling the number of points where vehicles can leave the site will allow sweeping and vacuuming efforts to be focused, and perhaps save money.
- Inspect potential sediment tracking locations daily.
- Visible sediment tracking should be swept or vacuumed on a daily basis.

Categories

EC	Erosion Control	
SE	Sediment Control	☒
TC	Tracking Control	☑
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	☑
Metals	
Bacteria	
Oil and Grease	☑
Organics	

Potential Alternatives

None

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- Do not use kick brooms or sweeper attachments. These tend to spread the dirt rather than remove it.
- If not mixed with debris or trash, consider incorporating the removed sediment back into the project

Costs

Rental rates for self-propelled sweepers vary depending on hopper size and duration of rental. Expect rental rates from $58/hour (3 yd^3 hopper) to $88/hour (9 yd^3 hopper), plus operator costs. Hourly production rates vary with the amount of area to be swept and amount of sediment. Match the hopper size to the area and expect sediment load to minimize time spent dumping.

Inspection and Maintenance

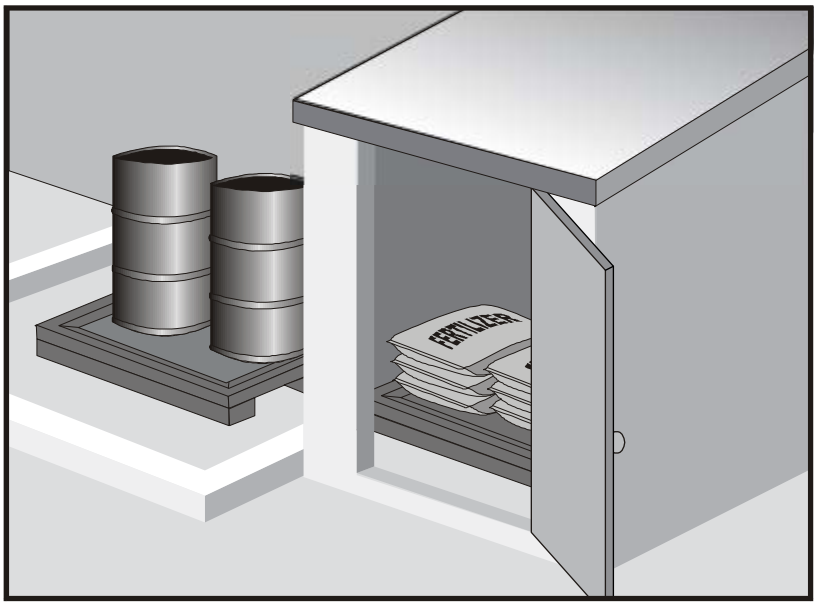
- Inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- When actively in use, points of ingress and egress must be inspected daily.
- When tracked or spilled sediment is observed outside the construction limits, it must be removed at least daily. More frequent removal, even continuous removal, may be required in some jurisdictions.
- Be careful not to sweep up any unknown substance or any object that may be potentially hazardous.
- Adjust brooms frequently; maximize efficiency of sweeping operations.
- After sweeping is finished, properly dispose of sweeper wastes at an approved dumpsite.

References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Labor Surcharge and Equipment Rental Rates, State of California Department of Transportation (Caltrans), April 1, 2002 – March 31, 2003.

Material Delivery and Storage WM-1



Categories		
EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Targeted Constituents	
Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

Description and Purpose

Prevent, reduce, or eliminate the discharge of pollutants from material delivery and storage to the stormwater system or watercourses by minimizing the storage of hazardous materials onsite, storing materials in watertight containers and/or a completely enclosed designated area, installing secondary containment, conducting regular inspections, and training employees and subcontractors.

This best management practice covers only material delivery and storage. For other information on materials, see WM-2, Material Use, or WM-4, Spill Prevention and Control. For information on wastes, see the waste management BMPs in this section.

Suitable Applications

These procedures are suitable for use at all construction sites with delivery and storage of the following materials:

- Soil stabilizers and binders
- Pesticides and herbicides
- Fertilizers
- Detergents
- Plaster
- Petroleum products such as fuel, oil, and grease

- Asphalt and concrete components
- Hazardous chemicals such as acids, lime, glues, adhesives, paints, solvents, and curing compounds
- Concrete compounds
- Other materials that may be detrimental if released to the environment

Limitations

- Space limitation may preclude indoor storage.
- Storage sheds often must meet building and fire code requirements.

Implementation

The following steps should be taken to minimize risk:

- Chemicals must be stored in water tight containers with appropriate secondary containment or in a storage shed.
- When a material storage area is located on bare soil, the area should be lined and bermed.
- Use containment pallets or other practical and available solutions, such as storing materials within newly constructed buildings or garages, to meet material storage requirements.
- Stack erodible landscape material on pallets and cover when not in use.
- Contain all fertilizers and other landscape materials when not in use.
- Temporary storage areas should be located away from vehicular traffic.
- Material Safety Data Sheets (MSDS) should be available on-site for all materials stored that have the potential to effect water quality.
- Construction site areas should be designated for material delivery and storage.
- Material delivery and storage areas should be located away from waterways, if possible.
    - Avoid transport near drainage paths or waterways.
    - Surround with earth berms or other appropriate containment BMP. See EC-9, Earth Dikes and Drainage Swales.
    - Place in an area that will be paved.
- Storage of reactive, ignitable, or flammable liquids must comply with the fire codes of your area. Contact the local Fire Marshal to review site materials, quantities, and proposed storage area to determine specific requirements. See the Flammable and Combustible Liquid Code, NFPA30.
- An up to date inventory of materials delivered and stored onsite should be kept.

- Hazardous materials storage onsite should be minimized.
- Hazardous materials should be handled as infrequently as possible.
- Keep ample spill cleanup supplies appropriate for the materials being stored. Ensure that cleanup supplies are in a conspicuous, labeled area.
- Employees and subcontractors should be trained on the proper material delivery and storage practices.
- Employees trained in emergency spill cleanup procedures must be present when dangerous materials or liquid chemicals are unloaded.
- If significant residual materials remain on the ground after construction is complete, properly remove and dispose of materials and any contaminated soil. See WM-7, Contaminated Soil Management. If the area is to be paved, pave as soon as materials are removed to stabilize the soil.

Material Storage Areas and Practices

- Liquids, petroleum products, and substances listed in 40 CFR Parts 110, 117, or 302 should be stored in approved containers and drums and should not be overfilled. Containers and drums should be placed in temporary containment facilities for storage.
- A temporary containment facility should provide for a spill containment volume able to contain precipitation from a 25 year storm event, plus the greater of 10% of the aggregate volume of all containers or 100% of the capacity of the largest container within its boundary, whichever is greater.
- A temporary containment facility should be impervious to the materials stored therein for a minimum contact time of 72 hours.
- A temporary containment facility should be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills should be collected and placed into drums. These liquids should be handled as a hazardous waste unless testing determines them to be non-hazardous. All collected liquids or non-hazardous liquids should be sent to an approved disposal site.
- Sufficient separation should be provided between stored containers to allow for spill cleanup and emergency response access.
- Incompatible materials, such as chlorine and ammonia, should not be stored in the same temporary containment facility.
- Materials should be covered prior to, and during rain events.
- Materials should be stored in their original containers and the original product labels should be maintained in place in a legible condition. Damaged or otherwise illegible labels should be replaced immediately.

- Bagged and boxed materials should be stored on pallets and should not be allowed to accumulate on the ground. To provide protection from wind and rain throughout the rainy season, bagged and boxed materials should be covered during non-working days and prior to and during rain events.
- Stockpiles should be protected in accordance with WM-3, Stockpile Management.
- Materials should be stored indoors within existing structures or completely enclosed storage sheds when available.
- Proper storage instructions should be posted at all times in an open and conspicuous location.
- An ample supply of appropriate spill clean up material should be kept near storage areas.
- Also see WM-6, Hazardous Waste Management, for storing of hazardous wastes.

Material Delivery Practices

- Keep an accurate, up-to-date inventory of material delivered and stored onsite.
- Arrange for employees trained in emergency spill cleanup procedures to be present when dangerous materials or liquid chemicals are unloaded.

Spill Cleanup

- Contain and clean up any spill immediately.
- Properly remove and dispose of any hazardous materials or contaminated soil if significant residual materials remain on the ground after construction is complete. See WM-7, Contaminated Soil Management.
- See WM-4, Spill Prevention and Control, for spills of chemicals and/or hazardous materials.
- If spills or leaks of materials occur that are not contained and could discharge to surface waters, non-visible sampling of site discharge may be required. Refer to the General Permit or to your project specific Construction Site Monitoring Plan to determine if and where sampling is required.

Cost

- The largest cost of implementation may be in the construction of a materials storage area that is covered and provides secondary containment.

Inspection and Maintenance

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Keep storage areas clean and well organized, including a current list of all materials onsite.
- Inspect labels on containers for legibility and accuracy.

- Repair or replace perimeter controls, containment structures, covers, and liners as needed to maintain proper function.

References

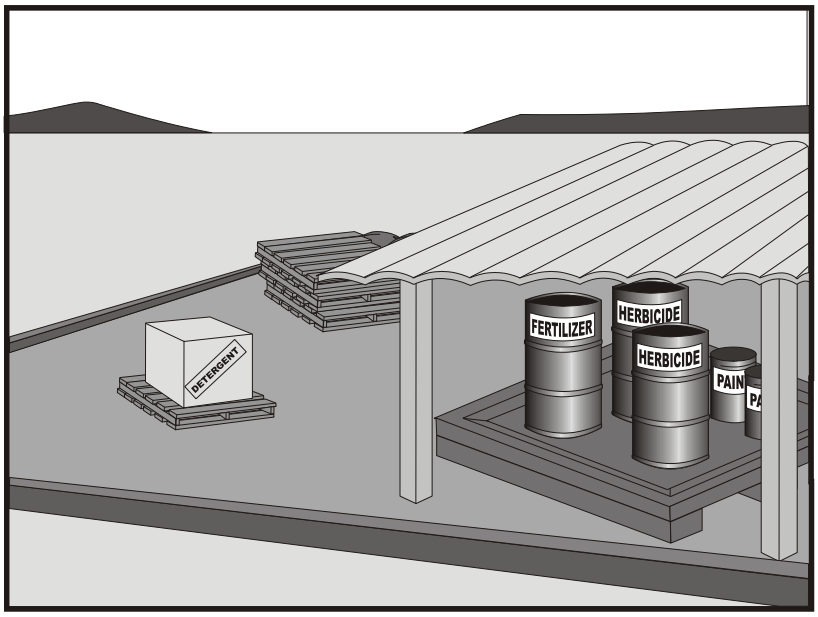
Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance, Working Group Working Paper; USEPA, April 1992.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.

Material Use WM-2



Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

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Description and Purpose

Prevent or reduce the discharge of pollutants to the storm drain system or watercourses from material use by using alternative products, minimizing hazardous material use onsite, and training employees and subcontractors.

Suitable Applications

This BMP is suitable for use at all construction projects. These procedures apply when the following materials are used or prepared onsite:

- Pesticides and herbicides
- Fertilizers
- Detergents
- Petroleum products such as fuel, oil, and grease
- Asphalt and other concrete components
- Other hazardous chemicals such as acids, lime, glues, adhesives, paints, solvents, and curing compounds
- Other materials that may be detrimental if released to the environment

Limitations

Safer alternative building and construction products may not be available or suitable in every instance.

Implementation

The following steps should be taken to minimize risk:

- Minimize use of hazardous materials onsite.
- Follow manufacturer instructions regarding uses, protective equipment, ventilation, flammability, and mixing of chemicals.
- Train personnel who use pesticides. The California Department of Pesticide Regulation and county agricultural commissioners license pesticide dealers, certify pesticide applicators, and conduct onsite inspections.
- The preferred method of termiticide application is soil injection near the existing or proposed structure foundation/slab; however, if not feasible, soil drench application of termiticides should follow EPA label guidelines and the following recommendations (most of which are applicable to most pesticide applications):
  - Do not treat soil that is water-saturated or frozen.
  - Application shall not commence within 24-hours of a predicted precipitation event with a 40% or greater probability. Weather tracking must be performed on a daily basis prior to termiticide application and during the period of termiticide application.
  - Do not allow treatment chemicals to runoff from the target area. Apply proper quantity to prevent excess runoff. Provide containment for and divert stormwater from application areas using berms or diversion ditches during application.
  - Dry season: Do not apply within 10 feet of storm drains. Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or ponds; estuaries; and commercial fish farm ponds).
  - Wet season: Do not apply within 50 feet of storm drains or aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or ponds; estuaries; and commercial fish farm ponds) unless a vegetative buffer is present (if so, refer to dry season requirements).
  - Do not make on-grade applications when sustained wind speeds are above 10 mph (at application site) at nozzle end height.
  - Cover treatment site prior to a rain event in order to prevent run-off of the pesticide into non-target areas. The treated area should be limited to a size that can be backfilled and/or covered by the end of the work shift. Backfilling or covering of the treated area shall be done by the end of the same work shift in which the application is made.
  - The applicator must either cover the soil him/herself or provide written notification of the above requirement to the contractor on site and to the person commissioning the

application (if different than the contractor). If notice is provided to the contractor or the person commissioning the application, then they are responsible under the Federal Insecticide Fungicide, and Rodenticide Act (FIFRA) to ensure that: 1) if the concrete slab cannot be poured over the treated soil within 24 hours of application, the treated soil is covered with a waterproof covering (such as polyethylene sheeting), and 2) the treated soil is covered if precipitation is predicted to occur before the concrete slab is scheduled to be poured.

- Do not over-apply fertilizers, herbicides, and pesticides. Prepare only the amount needed. Follow the recommended usage instructions. Over-application is expensive and environmentally harmful. Unless on steep slopes, till fertilizers into the soil rather than hydraulic application. Apply surface dressings in several smaller applications, as opposed to one large application, to allow time for infiltration and to avoid excess material being carried offsite by runoff. Do not apply these chemicals before predicted rainfall.
- Train employees and subcontractors in proper material use.
- Supply Material Safety Data Sheets (MSDS) for all materials.
- Dispose of latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths, when thoroughly dry and are no longer hazardous, with other construction debris.
- Do not remove the original product label; it contains important safety and disposal information. Use the entire product before disposing of the container.
- Mix paint indoors or in a containment area. Never clean paintbrushes or rinse paint containers into a street, gutter, storm drain, or watercourse. Dispose of any paint thinners, residue, and sludge(s) that cannot be recycled, as hazardous waste.
- For water-based paint, clean brushes to the extent practicable, and rinse to a drain leading to a sanitary sewer where permitted, or contain for proper disposal off site. For oil-based paints, clean brushes to the extent practicable, and filter and reuse thinners and solvents.
- Use recycled and less hazardous products when practical. Recycle residual paints, solvents, non-treated lumber, and other materials.
- Use materials only where and when needed to complete the construction activity. Use safer alternative materials as much as possible. Reduce or eliminate use of hazardous materials onsite when practical.
- Document the location, time, chemicals applied, and applicator's name and qualifications.
- Keep an ample supply of spill clean up material near use areas. Train employees in spill clean up procedures.
- Avoid exposing applied materials to rainfall and runoff unless sufficient time has been allowed for them to dry.
- Discontinue use of erodible landscape material within 2 days prior to a forecasted rain event and materials should be covered and/or bermed.

- Provide containment for material use areas such as masons' areas or paint mixing/preparation areas to prevent materials/pollutants from entering stormwater.

Costs

All of the above are low cost measures.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities.
- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Ensure employees and subcontractors throughout the job are using appropriate practices.

References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

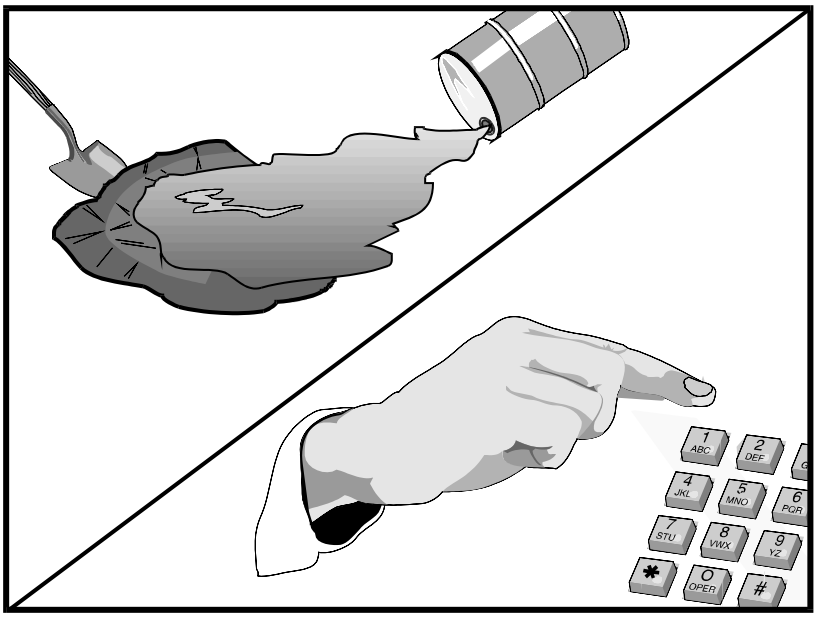
Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance, Working Group Working Paper; USEPA, April 1992.

Comments on Risk Assessments Risk Reduction Options for Cypermethrin: Docket No. OPP–2005–0293; California Stormwater Quality Association (CASQA) letter to USEPA, 2006.Environmental Hazard and General Labeling for Pyrethroid Non-Agricultural Outdoor Products, EPA-HQ-OPP-2008-0331-0021; USEPA, 2008.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.

Spill Prevention and Control WM-4



Description and Purpose

Prevent or reduce the discharge of pollutants to drainage systems or watercourses from leaks and spills by reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees.

This best management practice covers only spill prevention and control. However, WM-1, Materials Delivery and Storage, and WM-2, Material Use, also contain useful information, particularly on spill prevention. For information on wastes, see the waste management BMPs in this section.

Suitable Applications

This BMP is suitable for all construction projects. Spill control procedures are implemented anytime chemicals or hazardous substances are stored on the construction site, including the following materials:

- Soil stabilizers/binders
- Dust palliatives
- Herbicides
- Growth inhibitors
- Fertilizers
- Deicing/anti-icing chemicals

Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

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- Fuels
- Lubricants
- Other petroleum distillates

Limitations

- In some cases it may be necessary to use a private spill cleanup company.
- This BMP applies to spills caused by the contractor and subcontractors.
- Procedures and practices presented in this BMP are general. Contractor should identify appropriate practices for the specific materials used or stored onsite

Implementation

The following steps will help reduce the stormwater impacts of leaks and spills:

Education

- Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills.
- Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
- Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
- Establish a continuing education program to indoctrinate new employees.
- Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

- To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.
- Store hazardous materials and wastes in covered containers and protect from vandalism.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- Train employees in spill prevention and cleanup.
- Designate responsible individuals to oversee and enforce control measures.
- Spills should be covered and protected from stormwater runon during rainfall to the extent that it doesn't compromise clean up activities.
- Do not bury or wash spills with water.

- Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.
- Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with WM-10, Liquid Waste Management.
- Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
- Place proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
- Keep waste storage areas clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

- Clean up leaks and spills immediately.
- Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to either a certified laundry (rags) or disposed of as hazardous waste.
- Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

- Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.
- Use absorbent materials on small spills rather than hosing down or burying the spill.
- Absorbent materials should be promptly removed and disposed of properly.
- Follow the practice below for a minor spill:
  - Contain the spread of the spill.
  - Recover spilled materials.
  - Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

- Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.

- Spills should be cleaned up immediately:
  - Contain spread of the spill.
  - Notify the project foreman immediately.
  - If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
  - If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
  - If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

- For significant or hazardous spills that cannot be controlled by personnel in the immediate vicinity, the following steps should be taken:
  - Notify the local emergency response by dialing 911. In addition to 911, the contractor will notify the proper county officials. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
  - Notify the Governor's Office of Emergency Services Warning Center, (916) 845-8911.
  - For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.
  - Notification should first be made by telephone and followed up with a written report.
  - The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
  - Other agencies which may need to be consulted include, but are not limited to, the Fire Department, the Public Works Department, the Coast Guard, the Highway Patrol, the City/County Police Department, Department of Toxic Substances, California Division of Oil and Gas, Cal/OSHA, etc.

Reporting

- Report significant spills to local agencies, such as the Fire Department; they can assist in cleanup.
- Federal regulations require that any significant oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24 hours).

Use the following measures related to specific activities:

Vehicle and Equipment Maintenance

- If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.
- Regularly inspect onsite vehicles and equipment for leaks and repair immediately
- Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
- Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- Place drip pans or absorbent materials under paving equipment when not in use.
- Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.
- Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around
- Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.
- Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

- If fueling must occur onsite, use designate areas, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.
- Discourage "topping off" of fuel tanks.
- Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

Costs

Prevention of leaks and spills is inexpensive. Treatment and/ or disposal of contaminated soil or water can be quite expensive.

Inspection and Maintenance

- Inspect and verify that activity–based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.

- Inspect BMPs subject to non-stormwater discharge daily while non-stormwater discharges occur.
- Keep ample supplies of spill control and cleanup materials onsite, near storage, unloading, and maintenance areas.
- Update your spill prevention and control plan and stock cleanup materials as changes occur in the types of chemicals onsite.

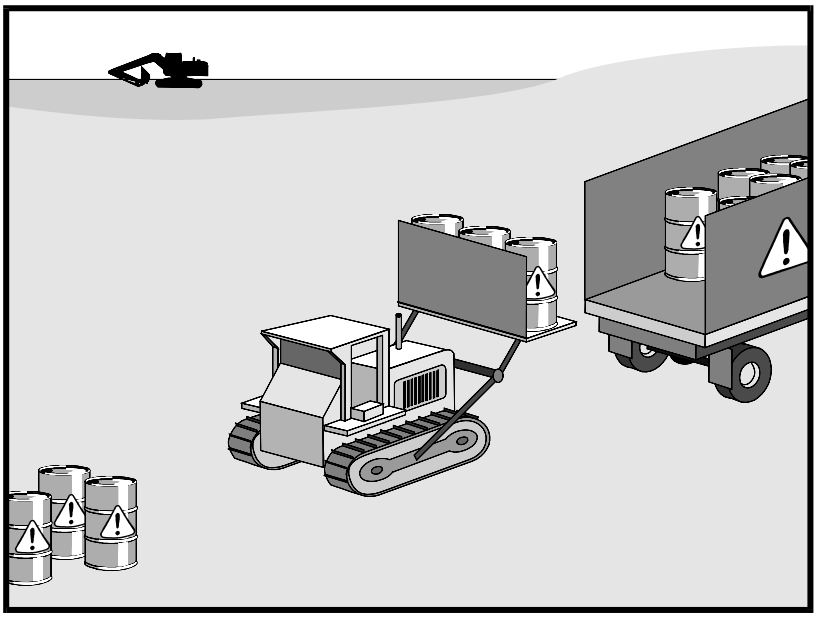
References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.

Hazardous Waste Management WM-6



Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

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Description and Purpose

Prevent or reduce the discharge of pollutants to stormwater from hazardous waste through proper material use, waste disposal, and training of employees and subcontractors.

Suitable Applications

This best management practice (BMP) applies to all construction projects. Hazardous waste management practices are implemented on construction projects that generate waste from the use of:

- Petroleum Products
- Asphalt Products
- Concrete Curing Compounds
- Pesticides
- Palliatives
- Acids
- Septic Wastes
- Paints
- Stains
- Solvents
- Wood Preservatives
- Roofing Tar
- Any materials deemed a hazardous waste in California, Title 22 Division 4.5, or listed in 40 CFR Parts 110, 117, 261, or 302

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In addition, sites with existing structures may contain wastes, which must be disposed of in accordance with federal, state, and local regulations. These wastes include:

- Sandblasting grit mixed with lead-, cadmium-, or chromium-based paints
- Asbestos
- PCBs (particularly in older transformers)

Limitations

- Hazardous waste that cannot be reused or recycled must be disposed of by a licensed hazardous waste hauler.
- Nothing in this BMP relieves the contractor from responsibility for compliance with federal, state, and local laws regarding storage, handling, transportation, and disposal of hazardous wastes.
- This BMP does not cover aerially deposited lead (ADL) soils. For ADL soils refer to WM-7, Contaminated Soil Management.

Implementation

The following steps will help reduce stormwater pollution from hazardous wastes:

Material Use

- Wastes should be stored in sealed containers constructed of a suitable material and should be labeled as required by Title 22 CCR, Division 4.5 and 49 CFR Parts 172, 173, 178, and 179.
- All hazardous waste should be stored, transported, and disposed as required in Title 22 CCR, Division 4.5 and 49 CFR 261-263.
- Waste containers should be stored in temporary containment facilities that should comply with the following requirements:
  - Temporary containment facility should provide for a spill containment volume equal to 1.5 times the volume of all containers able to contain precipitation from a 25 year storm event, plus the greater of 10% of the aggregate volume of all containers or 100% of the capacity of the largest tank within its boundary, whichever is greater.
  - Temporary containment facility should be impervious to the materials stored there for a minimum contact time of 72 hours.
  - Temporary containment facilities should be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills should be placed into drums after each rainfall. These liquids should be handled as a hazardous waste unless testing determines them to be non-hazardous. Non-hazardous liquids should be sent to an approved disposal site.
  - Sufficient separation should be provided between stored containers to allow for spill cleanup and emergency response access.

- Incompatible materials, such as chlorine and ammonia, should not be stored in the same temporary containment facility.

- Throughout the rainy season, temporary containment facilities should be covered during non-working days, and prior to rain events. Covered facilities may include use of plastic tarps for small facilities or constructed roofs with overhangs.

- Drums should not be overfilled and wastes should not be mixed.

- Unless watertight, containers of dry waste should be stored on pallets.

- Do not over-apply herbicides and pesticides. Prepare only the amount needed. Follow the recommended usage instructions. Over application is expensive and environmentally harmful. Apply surface dressings in several smaller applications, as opposed to one large application. Allow time for infiltration and avoid excess material being carried offsite by runoff. Do not apply these chemicals just before it rains. People applying pesticides must be certified in accordance with federal and state regulations.

- Paint brushes and equipment for water and oil based paints should be cleaned within a contained area and should not be allowed to contaminate site soils, watercourses, or drainage systems. Waste paints, thinners, solvents, residues, and sludges that cannot be recycled or reused should be disposed of as hazardous waste. When thoroughly dry, latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths should be disposed of as solid waste.

- Do not clean out brushes or rinse paint containers into the dirt, street, gutter, storm drain, or stream. "Paint out" brushes as much as possible. Rinse water-based paints to the sanitary sewer. Filter and reuse thinners and solvents. Dispose of excess oil-based paints and sludge as hazardous waste.

- The following actions should be taken with respect to temporary contaminant:

  - Ensure that adequate hazardous waste storage volume is available.

  - Ensure that hazardous waste collection containers are conveniently located.

  - Designate hazardous waste storage areas onsite away from storm drains or watercourses and away from moving vehicles and equipment to prevent accidental spills.

  - Minimize production or generation of hazardous materials and hazardous waste on the job site.

  - Use containment berms in fueling and maintenance areas and where the potential for spills is high.

  - Segregate potentially hazardous waste from non-hazardous construction site debris.

  - Keep liquid or semi-liquid hazardous waste in appropriate containers (closed drums or similar) and under cover.

- Clearly label all hazardous waste containers with the waste being stored and the date of accumulation.
- Place hazardous waste containers in secondary containment.
- Do not allow potentially hazardous waste materials to accumulate on the ground.
- Do not mix wastes.
- Use all of the product before disposing of the container.
- Do not remove the original product label; it contains important safety and disposal information.

Waste Recycling Disposal

- Select designated hazardous waste collection areas onsite.
- Hazardous materials and wastes should be stored in covered containers and protected from vandalism.
- Place hazardous waste containers in secondary containment.
- Do not mix wastes, this can cause chemical reactions, making recycling impossible and complicating disposal.
- Recycle any useful materials such as used oil or water-based paint.
- Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.
- Arrange for regular waste collection before containers overflow.
- Make sure that hazardous waste (e.g., excess oil-based paint and sludge) is collected, removed, and disposed of only at authorized disposal areas.

Disposal Procedures

- Waste should be disposed of by a licensed hazardous waste transporter at an authorized and licensed disposal facility or recycling facility utilizing properly completed Uniform Hazardous Waste Manifest forms.
- A Department of Health Services certified laboratory should sample waste to determine the appropriate disposal facility.
- Properly dispose of rainwater in secondary containment that may have mixed with hazardous waste.
- Attention is directed to "Hazardous Material", "Contaminated Material", and "Aerially Deposited Lead" of the contract documents regarding the handling and disposal of hazardous materials.

Education

- Educate employees and subcontractors on hazardous waste storage and disposal procedures.
- Educate employees and subcontractors on potential dangers to humans and the environment from hazardous wastes.
- Instruct employees and subcontractors on safety procedures for common construction site hazardous wastes.
- Instruct employees and subcontractors in identification of hazardous and solid waste.
- Hold regular meetings to discuss and reinforce hazardous waste management procedures (incorporate into regular safety meetings).
- The contractor's superintendent or representative should oversee and enforce proper hazardous waste management procedures and practices.
- Make sure that hazardous waste is collected, removed, and disposed of only at authorized disposal areas.
- Warning signs should be placed in areas recently treated with chemicals.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- If a container does spill, clean up immediately.

Costs

All of the above are low cost measures.

Inspection and Maintenance

- Inspect and verify that activity–based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events..
- Inspect BMPs subject to non-stormwater discharge daily while non-stormwater discharges occur
- Hazardous waste should be regularly collected.
- A foreman or construction supervisor should monitor onsite hazardous waste storage and disposal procedures.
- Waste storage areas should be kept clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored.
- Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

- Hazardous spills should be cleaned up and reported in conformance with the applicable Material Safety Data Sheet (MSDS) and the instructions posted at the project site.
- The National Response Center, at (800) 424-8802, should be notified of spills of federal reportable quantities in conformance with the requirements in 40 CFR parts 110, 117, and 302. Also notify the Governors Office of Emergency Services Warning Center at (916) 845-8911.
- A copy of the hazardous waste manifests should be provided.

References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

Processes, Procedures and Methods to Control Pollution Resulting from All Construction Activity, 430/9-73-007, USEPA, 1973.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

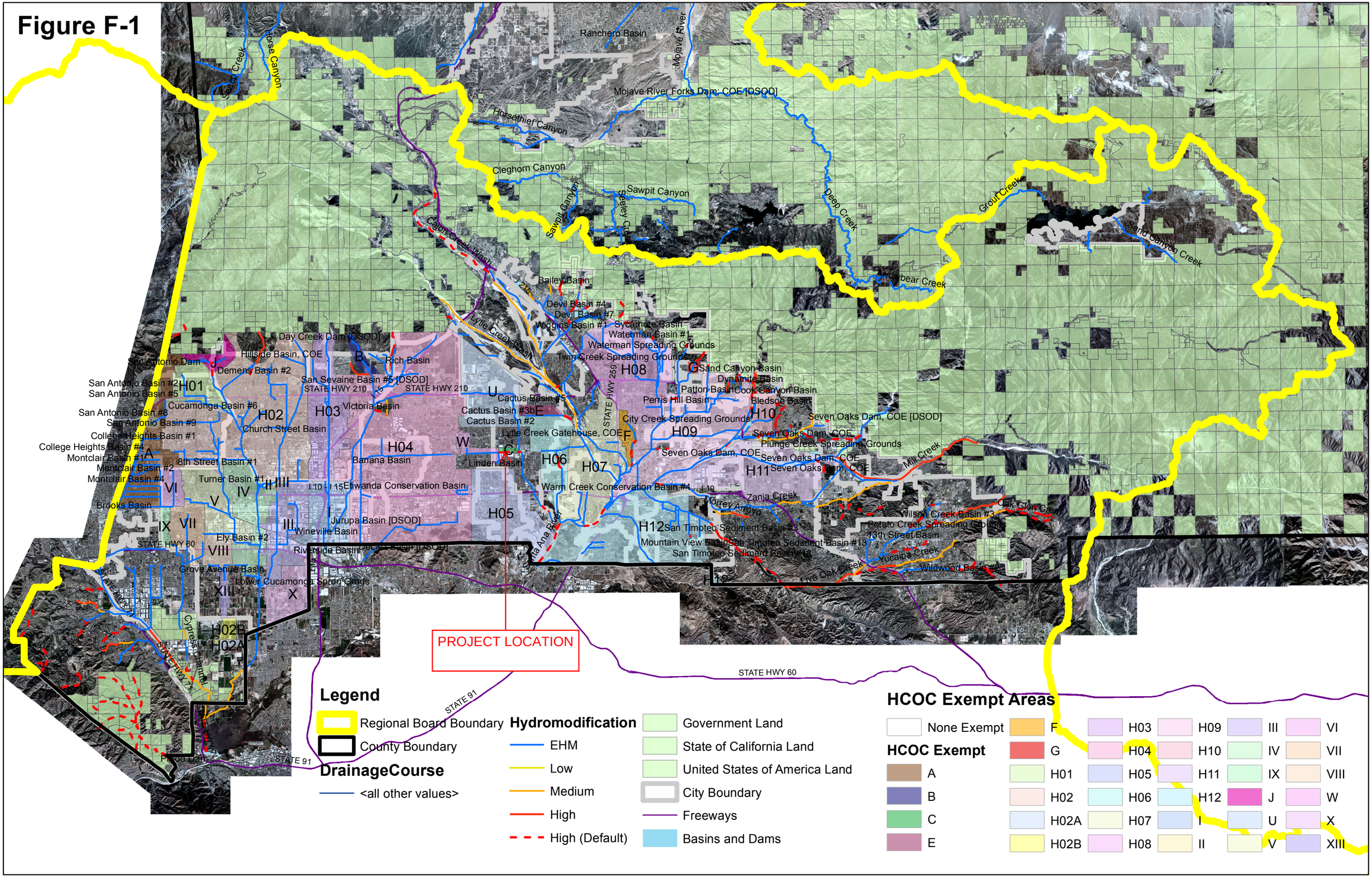
Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.

Section 6.4

Attachment G

- HCOC Exemption Supporting Files
- Factor of Safety and Design Infiltration Rate Worksheet
- Reference-1: Soil Report
- Reference-2: NOAA Rainfall Data

Figure F-1



Legend

- Regional Board Boundary
- County Boundary

DrainageCourse

- <all other values>

Hydromodification

- EHM
- Low
- Medium
- High
- High (Default)

- Government Land
- State of California Land
- United States of America Land
- City Boundary
- Freeways
- Basins and Dams

HCOC Exempt Areas

- None Exempt

HCOC Exempt

- A
- B
- C
- E
- F
- G
- H01
- H02
- H02A
- H02B
- H03
- H04
- H05
- H06
- H07
- H08
- H09
- H10
- H11
- H12
- I
- II
- III
- IV
- V
- VI
- VII
- VIII
- IX
- J
- U
- W
- X
- XIII

Hydromodification

A.1 Hydrologic Conditions of Concern (HCOC) Analysis

HCOC Exemption:

1. **Sump Condition:** All downstream conveyance channel to an adequate sump (for example, Prado Dam, Santa Ana River, or other Lake, Reservoir or naturally erosion resistant feature) that will receive runoff from the project are engineered and regularly maintained to ensure design flow capacity; no sensitive stream habitat areas will be adversely affected; or are not identified on the Co-Permittees Hydromodification Sensitivity Maps.

2. **Pre = Post**: The runoff flow rate, volume and velocity for the post-development condition of the Priority Development Project do not exceed the pre-development (i.e, naturally occurring condition for the 2-year, 24-hour rainfall event utilizing latest San Bernardino County Hydrology Manual.

    a. Submit a substantiated hydrologic analysis to justify your request.

3. **Diversion to Storage Area**: The drainage areas that divert to water storage areas which are considered as control/release point and utilized for water conservation.

    a. See Appendix F for the HCOC Exemption Map and the on-line Watershed Geodatabase (http://sbcounty.permitrack.com/wap) for reference.

4. **Less than One Acre**: The Priority Development Project disturbs less than one acre. The Co-permittee has the discretion to require a Project Specific WQMP to address HCOCs on projects less than one acre on a case by case basis. The project disturbs less than one acre and is not part of a common plan of development.

5. **Built Out Area**: The contributing watershed area to which the project discharges has a developed area percentage greater than 90 percent.

    a. See Appendix F for the HCOC Exemption Map and the on-line Watershed Geodatabase (http://sbcounty.permitrack.com/wap) for reference.

Summary of HCOC Exempted Area

	HCOC Exemption reasoning				
	1	2	3	4	5
Area					
A			X		X
B			X		
C					X
E			X		
F					X
G			X		X
H01	X		X		
H02	X		X		
H02A	X		X		
H02B			X		
H03			X		
H04	X		X		
H05	X				
H06			X		
H07	X				
H08	X		X		
H09	X				
H10	X		X		
H11	X		X		
H12	X				
J			X		
U			X		
W			X		
I			X		
II			X		
III					X
IV			X		X
V			X*		
VI					X
VII					X
VIII			X		
IX					X
X			X		
XIII			X		

*Detention/Conservation Basin

Worksheet H: Factor of Safety and Design Infiltration Rate and Worksheet

Factor Category		Factor Description	Assigned Weight (w)	Factor Value (v)	Product (p) p = w x v
A	Suitability Assessment	Soil assessment methods	0.25	1	0.25
		Predominant soil texture	0.25	1	0.25
		Site soil variability	0.25	1	0.25
		Depth to groundwater / impervious layer	0.25	1	0.25
		Suitability Assessment Safety Factor, $S_A = \Sigma p$			1
B	Design	Tributary area size	0.25	1	0.25
		Level of pretreatment/ expected sediment loads	0.25	1	0.25
		Redundancy	0.25	1	0.25
		Compaction during construction	0.25	1	0.25
		Design Safety Factor, $S_B = \Sigma p$			1
Combined Safety Factor, $S_{TOT} = S_A \times S_B$					1 (2 used)
Measured Infiltration Rate, inch/hr, K_M (corrected for test-specific bias)					3.4
Design Infiltration Rate, in/hr, $K_{DESIGN} = ~~S_{TOT} \times K_M~~$ Km/Stot					1.7

Supporting Data

Briefly describe infiltration test and provide reference to test forms:

See Infiltration Testing Section of Soils Report for test description and details.

Note: The minimum combined adjustment factor shall not be less than 2.0 and the maximum combined adjustment factor shall not exceed 9.0.

UPDATED GEOTECHNICAL INVESTIGATION PROPOSED COMMERCIAL/INDUSTRIAL BUILDING

1230 West Durst Drive
Rialto, California
for
BCIF Acquisitions LLC

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

March 31, 2021

BCIF Acquisitions LLC
4675 MacArthur Court, Suite 625
Newport Beach, California 92660

Attention: Mr. Peter F. Schafer
AVP, Development

Project No.: **21G149-1**

Subject: **Updated Geotechnical Investigation**
Proposed Commercial/Industrial Building
1230 West Durst Drive
Rialto, California

Dear Mr. Schafer:

In accordance with your request, we have conducted a geotechnical investigation at the subject site. We are pleased to present this report summarizing the conclusions and recommendations developed from our investigation.

We sincerely appreciate the opportunity to be of service on this project. We look forward to providing additional consulting services during the course of the project. If we may be of further assistance in any manner, please contact our office.

Respectfully Submitted,

SOUTHERN CALIFORNIA GEOTECHNICAL, INC.

Joseph Lozano Leon
Staff Engineer

Robert G. Trazo, GE 2655
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
ROBERT TRAZO
No. 2655
GEOTECHNICAL
STATE OF CALIFORNIA

Distribution: (1) Addressee

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APPENDICES

A Plate 1: Site Location Map
Plate 2: Boring Location Plan
B Boring Logs
C Laboratory Test Results
D Grading Guide Specifications
E Seismic Design Parameters

1.0 EXECUTIVE SUMMARY

Presented below is a brief summary of the conclusions and recommendations of this investigation. Since this summary is not all inclusive, it should be read in complete context with the entire report.

Site Preparation

- Demolition should include all foundations, floor slabs, septic systems, utilities and any other subsurface improvements that will not remain in place with the new development. Debris resultant from demolition should be disposed of off-site. Alternatively, concrete and asphalt debris may be pulverized to a maximum 2-inch particle size, well mixed with the on-site soils, and incorporated into new structural fills or it may be crushed and made into crushed miscellaneous base (CMB), if desired.
- Initial site stripping should include removal of the existing vegetation including grass and weeds, as well as any underlying topsoil, and any trees that will not remain with the proposed development. Stripping should also include the removal of any tree root masses. These materials should be disposed of off-site.
- Most of the borings encountered undocumented artificial fill soils, extending to depths of 2½ to 5½± feet. The fill soils are underlain by native alluvium which possesses unfavorable consolidation/collapse characteristics to depths of 4 to 5± feet below the existing site grades. Based on these conditions, remedial grading is considered warranted within the proposed building area in order to remove all of the undocumented fill soils in their entirety, any soils disturbed during demolition and a portion of the near-surface native alluvial soils, and replace these materials as compacted fill soils.
- It is recommended that the proposed building pad area be overexcavated to a depth of at least 4 feet below existing grade and to a depth of at least 3 feet below proposed pad grade. The overexcavation should also extend to a sufficient depth to remove all of the artificial fill materials. Overexcavation within the foundation areas is recommended to extend to a depth of at least 3 feet below proposed foundation bearing grade.
- It should be noted that compressible/collapsible silty sands were encountered at Boring No. B-1, extending to a depth of 9± feet. Deeper removal within this localized area may be required during grading of the proposed building pad.
- After overexcavation has been completed, the subgrade soils should be evaluated by the geotechnical engineer to identify any additional soils that should be overexcavated. The resulting subgrade should then be scarified to a depth of 12 inches, thoroughly moisture conditioned to 0 to 4 percent above optimum, and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. The previously excavated soils may then be replaced as compacted structural fill.
- The new pavement and flatwork subgrade soils are recommended to be scarified to a depth of 12± inches, thoroughly moisture conditioned to 0 to 4 percent above optimum, and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density.
- Based on the results of corrosivity testing, the on-site soils are considered to be corrosive to copper pipe.

Building Foundations

- Conventional shallow foundations, supported in newly placed structural fill soils.
- Maximum, net allowable soil bearing pressure: 2,500 lbs/ft^2.
- Minimum reinforcement consisting of at least two (2) No. 5 rebars (1 top and 1 bottom) in strip footings. Additional reinforcement may be necessary for structural considerations.

Building Floor Slab

- Conventional Slab-on-Grade, minimum 6 inches thick.
- Modulus of Subgrade Reaction: 150 psi/in.
- Reinforcement is not considered necessary, for geotechnical considerations.
- The actual floor slab reinforcement should be determined by the structural engineer, based on the imposed slab loading.

Pavements

ASPHALT PAVEMENTS (R = 40)					
Materials	**Thickness (inches)**				
	Parking Stalls (TI = 4.0)	Auto Drive Lanes (TI = 5.0)	Truck Traffic		
			(TI = 6.0)	(TI = 7.0)	(TI = 8.0)
Asphalt Concrete	3	3	3½	4	5
Aggregate Base	3	4	6	7	8
Compacted Subgrade	12	12	12	12	12

PORTLAND CEMENT CONCRETE PAVEMENTS (R = 40)				
Materials	**Thickness (inches)**			
	Automobile Parking and Drive Areas (TI = 5.0)	Truck Traffic Areas		
		(TI =6.0)	(TI =7.0)	(TI =8.0)
PCC	5	5	5½	6½
Compacted Subgrade (95% minimum compaction)	12	12	12	12

2.0 SCOPE OF SERVICES

The scope of services performed for this project was in accordance with our Proposal No. 21P191 dated March 11, 2021. The scope of services included a visual site reconnaissance and the review of the previously prepared geotechnical report to provide criteria for preparing the design of the building foundations, building floor slab, and parking lot pavements along with site preparation recommendations and construction considerations for the proposed development. The evaluation of the environmental aspects of this site was beyond the scope of services for this geotechnical investigation.

3.0 SITE AND PROJECT DESCRIPTION

3.1 Site Conditions

The subject site is located at the address of 1230 West Durst Drive in Rialto, California. The site is bounded to the north by a railroad easement, to the west by South Cedar Avenue, to the south by West Durst Drive, and to the east by an existing commercial/industrial building. The general location of the site is illustrated on the Site Location Map, enclosed as Plate 1 in Appendix A of this report.

The site consists of three (3) rectangular to irregular-shaped parcels, which total 8.94± acres in size. Based on our site reconnaissance performed on March 17, 2021, the site is currently vacant and developed with remnants of the former Southland Pipe Corporation. The previously existing development consisted of a 10,555± ft² industrial building located in the central region of the site, and two (2) concrete/base crushing facilities located in the east-central region and northeast corner of the site. The crushing facilities included, but were not limited to, canopies, above-ground storage tanks (AST's), concrete pillars, storage enclosures, and conveyor-belt pads. The 10,555± ft² industrial building is still present. This building is of steel frame construction with metal siding, and is assumed to be supported on conventional shallow foundations with a concrete slab-on-grade floor. An 8±-foot-high CMU wall borders the site. The site is also developed with an automobile asphaltic concrete (AC) parking lot in the southwestern region. The existing AC pavements are in poor condition with moderate to severe cracking throughout. Ground surface cover for the remainder of the site consists of exposed soils and aggregate base with isolated Portland cement concrete (PCC) areas. A concrete drain is also present along the southern half of the eastern property line.

Topographic information for the site was obtained from an ALTA plan provided by the client. The plan indicates that generally the overall site topography gently slopes downward to the southeast at a gradient of 2± percent. The elevation at the subject site generally ranges from 1235± feet mean sea level (msl) in the northwestern corner of the site to 1218± feet msl in the southeastern corner.

3.2 Proposed Development

The site plan provided to our office by the client indicates that the new development will consist of a single commercial/industrial building, 203,230± ft^2 in size. The building will be located in the western region of the property. Dock-high doors will be constructed along a portion of the east building wall. The building is expected to be surrounded by AC pavements in the parking and drive areas, PCC pavements in the loading dock area, and concrete flatwork and landscaped planters throughout the site.

Detailed structural information has not been provided. It is assumed that the new building will be a single-story structure of concrete tilt-up construction. Based on the assumed construction,

maximum column and wall loads are expected to be on the order of 100 kips and 4 to 7 kips per linear foot, respectively.

No significant amounts of below-grade construction, such as basements or crawl spaces, are expected to be included in the proposed development. Based on the assumed topography, cuts and fills of 3 to 5± feet are expected to be necessary to achieve the proposed site grades.

4.0 SUBSURFACE EXPLORATION

4.1 Scope of Exploration/Sampling Methods

The subsurface exploration conducted for this project consisted of six (6) borings (identified as Boring Nos. B-1 through B-6) advanced to depths of 20 to 25± feet below the existing site grades. All of the borings were drilled on July 13, 2020, and were logged during drilling by a member of our staff.

The borings were advanced with hollow-stem augers, by a conventional truck-mounted drilling rig. Representative bulk and relatively undisturbed soil samples were taken during drilling. Relatively undisturbed soil samples were taken with a split barrel "California Sampler" containing a series of one inch long, 2.416± inch diameter brass rings. This sampling method is described in ASTM Test Method D-3550. In-situ samples were also taken using a 1.4± inch inside diameter split spoon sampler, in general accordance with ASTM D-1586. Both of these samplers are driven into the ground with successive blows of a 140-pound weight falling 30 inches. The blow counts obtained during driving are recorded for further analysis. Bulk samples were collected in plastic bags to retain their original moisture content. The relatively undisturbed ring samples were placed in molded plastic sleeves that were then sealed and transported to our laboratory.

The approximate locations of the borings are indicated on the Boring Location Plan, included as Plate 2 in Appendix A of this report. The Boring Logs, which illustrate the conditions encountered at the boring locations, as well as the results of some of the laboratory testing, are included in Appendix B.

4.2 Geotechnical Conditions

Pavements

Boring No. B-4 was drilled through the existing AC pavement. The pavement section at this location consists of 1± inch of AC underlain by 6± inches of crushed aggregate base.

Artificial Fill

Artificial fill soils were encountered beneath the existing pavement at Boring No. B-4 and at the ground surface at Boring Nos. B-3, B-5 and B-6, extending to depths of 2½ to 5½± feet below the existing site grades. The fill soils generally consist of medium dense silty sands with varying fine gravel content. No soil samples were recovered at Boring No. B-4 due to the possible presence of an underground utility line. The fill soils possess a disturbed mottled appearance, resulting in their classification as artificial fill.

Alluvium

Native alluvium was encountered beneath the artificial fill soils and at the ground surface at all of the boring locations, extending to at least the maximum depth explored of 25± feet below the existing site grades. The near-surface alluvium generally consists of medium dense to dense gravelly sands, silty sands, and sands with varying fine to coarse gravel content, extending to depths of 5½ to 12± feet. At greater depths and extending to the maximum depth explored of 25± feet, the alluvial soils generally consist of dense to very dense sands, gravelly sands and occasional very dense silty sands. Boring No. B-2 encountered a soil stratum consisting of dense to very dense gravelly sands, extending from the ground surface to a depth of 20± feet.

Groundwater

Free water was not encountered during the drilling of any of the borings. Based on the lack of any water within the borings, and the moisture contents of the recovered soil samples, the static groundwater is considered to have existed at a depth in excess of 25± feet at the time of the subsurface exploration.

As a part of our research, we reviewed available groundwater data in order to determine groundwater levels for the site. Water level data was obtained from the California Department of Water Resources Water Data Library website, https://wdl.water.ca.gov/waterdatalibrary/. The nearest monitoring well on record (identified as State Well Number: 01S05W11F003S) is located 1± mile northeast of the project site. Water level readings within this monitoring well indicate a high groundwater level of 223± feet below the ground surface in May 1999.

5.0 LABORATORY TESTING

The soil samples recovered from the subsurface exploration were returned to our laboratory for further testing to determine selected physical and engineering properties of the soils. The tests are briefly discussed below. It should be noted that the test results are specific to the actual samples tested, and variations could be expected at other locations and depths.

Classification

All recovered soil samples were classified using the Unified Soil Classification System (USCS), in accordance with ASTM D-2488. Field identifications were then supplemented with additional visual classifications and/or by laboratory testing. The USCS classifications are shown on the Boring Logs and are periodically referenced throughout this report.

Density and Moisture Content

The density has been determined for selected relatively undisturbed ring samples. These densities were determined in general accordance with the method presented in ASTM D-2937. The results are recorded as dry unit weight in pounds per cubic foot. The moisture contents are determined in accordance with ASTM D-2216, and are expressed as a percentage of the dry weight. These test results are presented on the Boring Logs.

Consolidation

Selected soil samples have been tested to determine their consolidation potential, in accordance with ASTM D-2435. The testing apparatus is designed to accept either natural or remolded samples in a one-inch high ring, approximately 2.416 inches in diameter. Each sample is then loaded incrementally in a geometric progression and the resulting deflection is recorded at selected time intervals. Porous stones are in contact with the top and bottom of the sample to permit the addition or release of pore water. The samples are typically inundated with water at an intermediate load to determine their potential for collapse or heave. The results of the consolidation testing are plotted on Plates C-1 through C-4 in Appendix C of this report.

Maximum Dry Density and Optimum Moisture Content

A representative bulk sample has been tested for its maximum dry density and optimum moisture content. The results have been obtained using the Modified Proctor procedure, per ASTM D-1557 and are presented on Plate C-5 in Appendix C of this report. This test is generally used to compare the in-situ densities of undisturbed field samples, and for later compaction testing. Additional testing of other soil types or soil mixes may be necessary at a later date.

Soluble Sulfates

A representative sample of the near-surface soil was submitted to a subcontracted analytical laboratory for determination of soluble sulfate content. Soluble sulfates are naturally present in soils, and if the concentration is high enough, can result in degradation of concrete which comes

into contact with these soils. The results of the soluble sulfate testing are presented below, and are discussed further in a subsequent section of this report.

Sample Identification	Soluble Sulfates (%)	Sulfate Classification
B-6 @ 0 to 5 feet	0.006	Not Applicable (S0)

Corrosivity Testing

One representative bulk sample of the near-surface soils was submitted to a subcontracted corrosion engineering laboratory to identify potentially corrosive characteristics with respect to common construction materials. The corrosivity testing included a determination of the electrical resistivity, pH, and chloride and nitrate concentrations of the soils, as well as other tests. The results of some of these tests are presented below.

Sample Identification	Saturated Resistivity (ohm-cm)	pH	Chlorides (mg/kg)	Nitrates (mg/kg)
B-6 @ 0 to 5 feet	3,720	7.6	5.8	84

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our review, field exploration, laboratory testing and geotechnical analysis, the proposed development is considered feasible from a geotechnical standpoint. The recommendations contained in this report should be taken into the design, construction, and grading considerations.

The recommendations are contingent upon all grading and foundation construction activities being monitored by the geotechnical engineer of record. The recommendations are provided with the assumption that an adequate program of client consultation, construction monitoring, and testing will be performed during the final design and construction phases to verify compliance with these recommendations. Maintaining Southern California Geotechnical, Inc., (SCG) as the geotechnical consultant from the beginning to the end of the project will provide continuity of services. The geotechnical engineering firm providing testing and observation services shall assume the responsibility of Geotechnical Engineer of Record.

The Grading Guide Specifications, included as Appendix D, should be considered part of this report, and should be incorporated into the project specifications. The contractor and/or owner of the development should bring to the attention of the geotechnical engineer any conditions that differ from those stated in this report, or which may be detrimental for the development.

6.1 Seismic Design Considerations

The subject site is located in an area which is subject to strong ground motions due to earthquakes. The performance of a site specific seismic hazards analysis was beyond the scope of this investigation. However, numerous faults capable of producing significant ground motions are located near the subject site. Due to economic considerations, it is not generally considered reasonable to design a structure that is not susceptible to earthquake damage. Therefore, significant damage to structures may be unavoidable during large earthquakes. The proposed structure should, however, be designed to resist structural collapse and thereby provide reasonable protection from serious injury, catastrophic property damage and loss of life.

Faulting and Seismicity

Research of available maps indicates that the subject site is not located within an Alquist-Priolo Earthquake Fault Zone. Furthermore, SCG did not identify any evidence of faulting during the geotechnical investigation. Therefore, the possibility of significant fault rupture on the site is considered to be low.

The potential for other geologic hazards such as seismically induced settlement, lateral spreading, tsunamis, inundation, seiches, flooding, and subsidence affecting the site is considered low.

Seismic Design Parameters

The 2019 California Building Code (CBC) provides procedures for earthquake resistant structural design that include considerations for on-site soil conditions, occupancy, and the configuration of the structure including the structural system and height. The seismic design parameters presented below are based on the soil profile and the proximity of known faults with respect to the subject site.

Based on standards in place at the time of this report, the proposed development is expected to be designed in accordance with the requirements of the 2019 edition of the California Building Code (CBC), which was adopted on January 1, 2020.

The 2019 CBC Seismic Design Parameters have been generated using the SEAOC/OSHPD Seismic Design Maps Tool, a web-based software application available at the website www.seismicmaps.org. This software application calculates seismic design parameters in accordance with several building code reference documents, including ASCE 7-16, upon which the 2019 CBC is based. The application utilizes a database of risk-targeted maximum considered earthquake (MCE_R) site accelerations at 0.01-degree intervals for each of the code documents. The table below was created using data obtained from the application. The output generated from this program is included as Plate E-1 in Appendix E of this report.

The 2019 CBC requires that a site-specific ground motion study be performed in accordance with Section 11.4.8 of ASCE 7-16 for Site Class D sites with a mapped S_1 value greater than 0.2. However, Section 11.4.8 of ASCE 7-16 also indicates an exception to the requirement for a site-specific ground motion hazard analysis for certain structures on Site Class D sites. The commentary for Section 11 of ASCE 7-16 (Page 534 of Section C11 of ASCE 7-16) indicates that "In general, this exception effectively limits the requirements for site-specific hazard analysis to very tall and or flexible structures at Site Class D sites." **Based on our understanding of the proposed development, the seismic design parameters presented below were calculated assuming that the exception in Section 11.4.8 applies to the proposed structure at this site. However, the structural engineer should verify that this exception is applicable to the proposed structure.** Based on the exception, the spectral response accelerations presented below were calculated using the site coefficients (F_a and F_v) from Tables 1613.2.3(1) and 1613.2.3(2) presented in Section 16.4.4 of the 2019 CBC.

2019 CBC SEISMIC DESIGN PARAMETERS

Parameter		Value
Mapped Spectral Acceleration at 0.2 sec Period	S_S	1.786
Mapped Spectral Acceleration at 1.0 sec Period	S_1	0.700
Site Class	---	D
Site Modified Spectral Acceleration at 0.2 sec Period	S_{MS}	1.786
Site Modified Spectral Acceleration at 1.0 sec Period	S_{M1}	1.190
Design Spectral Acceleration at 0.2 sec Period	S_{DS}	1.190
Design Spectral Acceleration at 1.0 sec Period	S_{D1}	0.793

It should be noted that the site coefficient F_v and the parameters S_{M1} and S_{D1} were not included in the SEAOC/OSHPD Seismic Design Maps Tool output for the 2019 CBC. We calculated these parameters-based on Table 1613.2.3(2) in Section 16.4.4 of the 2019 CBC using the value of S_1 obtained from the Seismic Design Maps Tool, assuming that a site-specific ground motion hazards analysis is not required for the proposed building at this site.

Liquefaction

Liquefaction is the loss of strength in generally cohesionless, saturated soils when the pore-water pressure induced in the soil by a seismic event becomes equal to or exceeds the overburden pressure. The primary factors which influence the potential for liquefaction include groundwater table elevation, soil type and grain size characteristics, relative density of the soil, initial confining pressure, and intensity and duration of ground shaking. The depth within which the occurrence of liquefaction may impact surface improvements is generally identified as the upper 50 feet below the existing ground surface. Liquefaction potential is greater in saturated, loose, poorly graded fine sands with a mean (d_{50}) grain size in the range of 0.075 to 0.2 mm (Seed and Idriss, 1971). Clayey (cohesive) soils or soils which possess clay particles (d<0.005mm) in excess of 20 percent (Seed and Idriss, 1982) are generally not considered to be susceptible to liquefaction, nor are those soils which are above the historic static groundwater table.

The California Geological Survey (CGS) has not yet conducted detailed seismic hazards mapping in the area of the subject site. The general liquefaction susceptibility of the site was determined by research of the San Bernardino County Land Use Plan, General Plan, Geologic Hazard Overlays. Map FH29 for the Fontana 7.5-Minute Quadrangle indicates that the subject site is not located within an area of liquefaction susceptibility. Based on the mapping performed by the county of San Bernardino and the lack of a historic high ground water table within the upper 50± feet of the ground surface, liquefaction is not considered to be a design concern for this project.

6.2 Geotechnical Design Considerations

General

Most of the borings encountered artificial fill materials, extending to depths of 2½ to 5½± feet below the existing site grades. Based on a lack of documentation regarding the placement and compaction of the existing fill materials, these soils are considered to consist of undocumented fill, and are not suitable for the support of the foundation loads of the proposed building. The fill soils are underlain by native alluvium which possesses unfavorable consolidation/collapse characteristics to depths of 4 to 5± feet below the existing site grades. Additionally, it is anticipated that demolition of the existing structures and associated improvements will cause disturbance of the upper 3 to 5± feet of soil. Therefore, remedial grading is considered warranted within the proposed building area in order to remove all of the undocumented fill soils in their entirety, the upper portion of the near-surface native alluvial soils, and any soils disturbed during the demolition process, and replace these materials as compacted structural fill soils. It should be noted that compressible/collapsible silty sands were encountered at Boring No. B-1, extending to a depth of 9± feet. Deeper removal within this localized area may be required during grading of the proposed building pad.

Settlement

The recommended remedial grading will remove the existing undocumented fill soils and a portion of the native alluvial soils and replace these materials as compacted structural fill. The native soils that will remain in place below the recommended depth of overexcavation will not be subject to large stress increases from the foundations of the new structure. Therefore, following completion of the recommended grading, post-construction settlements are expected to be within tolerable limits.

Expansion

The near-surface soils consist of sands and silty sands with no appreciable clay content. These materials have been visually classified as non-expansive. Therefore, no design considerations related to expansive soils are considered warranted for this site.

Soluble Sulfates

The results of the soluble sulfate testing indicate that the selected sample of the on-site soils contains a sulfate concentration that corresponds to Class S0 with respect to the American Concrete Institute (ACI) Publication 318-05 Building Code Requirements for Structural Concrete and Commentary, Section 4.3. Therefore, specialized concrete mix designs are not considered to be necessary, with regard to sulfate protection purposes. It is, however, recommended that additional soluble sulfate testing be conducted at the completion of rough grading to verify the soluble sulfate concentrations of the soils which are present at pad grade within the building areas.

Corrosion Potential

The results of laboratory testing indicate that the tested sample of the on-site soils possesses a saturated resistivity value of 3,720 ohm-cm, and a pH value of 7.6. These test results have been evaluated in accordance with guidelines published by the Ductile Iron Pipe Research Association (DIPRA). The DIPRA guidelines consist of a point system by which characteristics of the soils are used to quantify the corrosivity characteristics of the site. Resistivity and pH are two of the five factors that enter into the evaluation procedure. Redox potential, relative soil moisture content and sulfides are also included. Although sulfide testing was not part of the scope of services for this project, we have evaluated the corrosivity characteristics of the on-site soils using resistivity, pH and moisture content. Based on these factors, and utilizing the DIPRA procedure, the on-site soils are not considered to be corrosive to ductile iron pipe. Therefore, polyethylene protection is not expected to be required for cast iron or ductile iron pipes. However, SCG does not practice in the area of corrosion engineering. Therefore, the client may also wish to contact a corrosion engineer to provide a more thorough evaluation.

A relatively low concentration (5.8 mg/kg) of chlorides was detected in the sample submitted for corrosivity testing. In general, soils possessing chloride concentrations in excess of 500 parts per million (ppm) are considered to be corrosive with respect to steel reinforcement within reinforced concrete. Based on the lack of any significant chlorides in the tested sample, the site is considered to have a C1 chloride exposure in accordance with the American Concrete Institute (ACI) Publication 318 Building Code Requirements for Structural Concrete and Commentary. Therefore,

a specialized concrete mix design for reinforced concrete for protection against chloride exposure is not considered warranted.

Nitrates

Nitrates present in soil can be corrosive to copper tubing at concentrations greater than 50 mg/kg. The tested sample possesses a nitrate concentration of 84 mg/kg. **Based on this test result, the on-site soils are considered to be corrosive to copper pipe.** Since SCG does not practice in the area of corrosion engineering, we recommend that the client contact a corrosion engineer to provide recommendations for the protection of copper tubing/pipe in contact with the on-site soils.

Shrinkage/Subsidence

Removal and recompaction of the existing fill soils and near-surface alluvium is estimated to result in an average shrinkage of 5 to 15 percent. However, potential shrinkage for individual samples ranged locally between 2 and 17 percent. The potential shrinkage estimate is based on dry density testing performed on small-diameter samples taken at the boring locations. If a more accurate and precise shrinkage estimate is desired, SCG can perform a shrinkage study involving several excavated test-pits where in-place densities are determined using in-situ testing methods instead of laboratory density testing on small-diameter samples. Please contact SCG for details and a cost estimate regarding a shrinkage study, if desired.

Minor ground subsidence is expected to occur in the soils below the zone of removal, due to settlement and machinery working. The subsidence is estimated to be 0.1 feet.

These estimates are based on previous experience and the subsurface conditions encountered at the boring locations. The actual amount of subsidence is expected to be variable and will be dependent on the type of machinery used, repetitions of use, and dynamic effects, all of which are difficult to assess precisely.

Grading and Foundation Plan Review

Grading and foundation plans were not available at the time of this report. It is therefore recommended that we be provided with copies of the preliminary grading and foundation plans, when they become available, for review with regard to the conclusions, recommendations, and assumptions contained within this report.

6.3 Site Grading Recommendations

The grading recommendations presented below are based on the subsurface conditions encountered at the boring locations and our understanding of the proposed development. We recommend that all grading activities be completed in accordance with the Grading Guide Specifications included as Appendix D of this report, unless superseded by site-specific recommendations presented below.

Site Stripping and Demolition

Demolition of the existing structures, concrete pads, and asphalt pavements will be necessary in order to facilitate the construction of the proposed development. Demolition should include all foundations, floor slabs, utilities and any other subsurface improvements that will not remain in place with the new development. Based on our experience with nearby projects, septic systems may be present in the areas of the existing structures. Any septic systems, including the associated leach fields encountered during demolition and/or grading should be removed in their entirety. If deeper seepage pits are encountered, our office should be contacted for additional recommendations. Debris resultant from demolition should be disposed of off-site. Alternatively, concrete and asphalt debris may be pulverized to a maximum 2-inch particle size, well mixed with the on-site soils, and incorporated into new structural fills or it may be crushed and made into crushed miscellaneous base (CMB), if desired.

Initial site stripping should also include removal of any surficial vegetation from the unpaved areas of the site. This should include any weeds, grasses, shrubs, and trees. Root systems associated with the trees should be removed in their entirety, and the resultant excavations should be backfilled with compacted structural fill soils. The actual extent of site stripping should be determined in the field by the geotechnical engineer, based on the organic content and stability of the materials encountered.

Treatment of Existing Soils: Building Pad

Remedial grading should be performed within the proposed building area in order to remove the existing undocumented fill soils, any soils disturbed during demolition, and the near-surface compressible/collapsible native alluvium. Undocumented fill soils were encountered at most of the boring locations extending to depths of 2½ to 5½± feet below the existing site grades. Based on conditions encountered at the boring locations, the existing soils within the proposed building area is recommended to be overexcavated to a depth of at least 4 feet below existing grade and to a depth of at least 3 feet below proposed building pad subgrade elevation, whichever is greater. Within the influence zones of the new foundations, the overexcavation should extend to a depth of at least 3 feet below proposed foundation bearing grade. It should be noted that compressible/collapsible silty sands were encountered at Boring No. B-1, extending to a depth of 9± feet. Deeper removal within this localized area may be required during grading of the proposed building pad.

The overexcavation areas should extend at least 5 feet beyond the building and foundation perimeters, and to an extent equal to the depth of fill placed below the foundation bearing grade, whichever is greater. If the proposed structure incorporates any exterior columns (such as for a canopy or overhang) the area of overexcavation should also encompass these areas.

Following completion of the overexcavation, the subgrade soils within the building area should be evaluated by the geotechnical engineer to verify their suitability to serve as the structural fill subgrade, as well as to support the foundation loads of the new structure. This evaluation should include proofrolling and probing to identify any soft, loose or otherwise unstable soils that must be removed. **Some localized areas of deeper excavation may be required if additional fill materials or loose, porous, or low density native soils are encountered at the base of the overexcavation**.

After a suitable overexcavation subgrade has been achieved, the exposed soils should be scarified to a depth of at least 12 inches and moisture treated to 0 to 4 percent above optimum moisture content. The subgrade soils should then be recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. The building pad areas may then be raised to grade with previously excavated soils or imported structural fill.

Treatment of Existing Soils: Retaining Walls and Site Walls

The existing soils within the areas of any proposed retaining walls and site walls should be overexcavated to a depth of 3 feet below foundation bearing grade and replaced as compacted structural fill as discussed above for the proposed building pad. Any undocumented fill soils or disturbed native alluvium within any of these foundation areas should be removed in their entirety. The overexcavation areas should extend at least 5 feet beyond the foundation perimeters, and to an extent equal to the depth of fill below the new foundations. Any erection pads for tilt-up concrete walls are considered to be part of the foundation system. Therefore, these overexcavation recommendations are applicable to erection pads. The overexcavation subgrade soils should be evaluated by the geotechnical engineer prior to scarifying, moisture conditioning to within 0 to 4 percent above the optimum moisture content, and recompacting the upper 12 inches of exposed subgrade soils. The previously excavated soils may then be replaced as compacted structural fill.

If the full lateral recommended remedial grading cannot be completed for the proposed retaining walls and site walls located along property lines, the foundations for those walls should be designed using a reduced allowable bearing pressure. Furthermore, the contractor should take necessary precautions to protect the adjacent structures during rough grading. Specialized grading techniques, such as A-B-C slot cuts, will likely be required during remedial grading. The geotechnical engineer of record should be contacted if additional recommendations, such as shoring design recommendations, are required during grading.

Treatment of Existing Soils: Flatwork, Parking and Drive Areas

Based on economic considerations, overexcavation of the existing near-surface existing soils in the new flatwork, parking and drive areas is not considered warranted, with the exception of areas where lower strength or unstable soils are identified by the geotechnical engineer during grading. Subgrade preparation in the new flatwork, parking and drive areas should initially consist of removal of all soils disturbed during stripping and demolition operations.

The geotechnical engineer should then evaluate the subgrade to identify any areas of additional unsuitable soils. Any such materials should be removed to a level of firm and unyielding soil. The exposed subgrade soils should then be scarified to a depth of 12± inches, moisture conditioned to 0 to 4 percent above the optimum moisture content, and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. Based on the presence of variable strength surficial soils throughout the site, it is expected that some isolated areas of additional overexcavation may be required to remove zones of lower strength, unsuitable soils.

The grading recommendations presented above for the proposed flatwork, parking and drive areas assume that the owner and/or developer can tolerate minor amounts of settlement within these areas. The grading recommendations presented above do not mitigate the extent of

undocumented fill or compressible/collapsible native alluvium in the flatwork, parking and drive areas. As such, some settlement and associated pavement distress could occur. Typically, repair of such distressed areas involves significantly lower costs than completely mitigating these soils at the time of construction. If the owner cannot tolerate the risk of such settlements, the flatwork, parking and drive areas should be overexcavated to a depth of 2 feet below proposed pavement subgrade elevation, with the resulting soils replaced as compacted structural fill.

Fill Placement

- Fill soils should be placed in thin (6± inches), near-horizontal lifts, moisture conditioned to 0 to 4 percent above the optimum moisture content, and compacted.
- On-site soils may be used for fill provided they are cleaned of any debris to the satisfaction of the geotechnical engineer.
- All grading and fill placement activities should be completed in accordance with the requirements of the 2019 CBC and the grading code of the city of Rialto.
- All fill soils should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density.
- Compaction tests should be performed periodically by the geotechnical engineer as random verification of compaction and moisture content. These tests are intended to aid the contractor. Since the tests are taken at discrete locations and depths, they may not be indicative of the entire fill and therefore should not relieve the contractor of his responsibility to meet the job specifications.

Imported Structural Fill

All imported structural fill should consist of very low expansive (EI < 20), well graded soils possessing at least 10 percent fines (that portion of the sample passing the No. 200 sieve). Additional specifications for structural fill are presented in the Grading Guide Specifications, included as Appendix D.

Utility Trench Backfill

In general, all utility trench backfill soils should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density. It is recommended that materials in excess of 3 inches in size not be used for utility trench backfill. Compacted trench backfill should conform to the requirements of the local grading code, and more restrictive requirements may be indicated by the city of Rialto. All utility trench backfills should be witnessed by the geotechnical engineer. The trench backfill soils should be compaction tested where possible; probed and visually evaluated elsewhere.

Utility trenches which parallel a footing, and extending below a 1h:1v plane projected from the outside edge of the footing should be backfilled with structural fill soils, compacted to at least 90 percent of the ASTM D-1557 standard. Pea gravel backfill should not be used for these trenches.

6.4 Construction Considerations

Excavation Considerations

The near-surface soils are predominately granular in nature. These materials will likely be subject to caving within shallow excavations. Where caving occurs within shallow excavations, flattened excavation slopes may be sufficient to provide excavation stability. On a preliminary basis, the inclination of temporary slopes should not exceed 2h:1v. Deeper excavations may require some form of external stabilization such as shoring or bracing. Maintaining adequate moisture content within the near-surface soils will improve excavation stability. All excavation activities on this site should be conducted in accordance with Cal-OSHA regulations.

Moisture Sensitive Subgrade Soils

Some of the near-surface soils possess appreciable silt content. These soils may become unstable if exposed to significant moisture infiltration or disturbance by construction traffic. In addition, based on their granular content, some of the on-site soils will also be susceptible to erosion. The site should, therefore, be graded to prevent ponding of surface water and to prevent water from running into excavations.

Groundwater

The static groundwater table at this site is considered to exist at a depth of more than 25± feet. Therefore, groundwater is not expected to impact the grading or foundation construction activities.

6.5 Foundation Design and Construction

Based on the preceding grading recommendations, it is assumed that the new building pad will be underlain by structural fill soils used to replace existing undocumented fill soils and the upper-portion of the alluvium. These new structural fill soils are expected to extend to depths of at least 3 feet below proposed foundation bearing grade, underlain by 1± foot of additional soil that has been densified and moisture conditioned in place. Based on this subsurface profile, the proposed structure may be supported on conventional shallow foundations.

Foundation Design Parameters

New square and rectangular footings may be designed as follows:

- Maximum, net allowable soil bearing pressure: 2,500 lbs/ft^2.
- Maximum, net allowable soil bearing pressure: 1,500 lbs/ft^2 if the full recommended lateral extent of remedial grading cannot be achieved.
- Minimum wall/column footing width: 14 inches/24 inches.

- Minimum longitudinal steel reinforcement within strip footings: Two (2) No. 5 rebars (1 top and 1 bottom).

- Minimum foundation embedment: 12 inches into suitable structural fill soils, and at least 18 inches below adjacent exterior grade. Interior column footings may be placed immediately beneath the floor slab.

- It is recommended that the perimeter building foundations be continuous across all exterior doorways. Any flatwork adjacent to the exterior doors should be doweled into the perimeter foundations in a manner determined by the structural engineer.

The allowable bearing pressures presented above may be increased by 1/3 when considering short duration wind or seismic loads. The minimum steel reinforcement recommended above is based on standard geotechnical practice. The actual design of the foundations should be determined by the structural engineer.

Foundation Construction

The foundation subgrade soils should be evaluated at the time of overexcavation, as discussed in Section 6.3 of this report. It is further recommended that the foundation subgrade soils be evaluated by the geotechnical engineer immediately prior to steel or concrete placement. Soils suitable for direct foundation support should consist of newly placed structural fill, compacted to at least 90 percent of the ASTM D-1557 maximum dry density. Any unsuitable materials should be removed to a depth of suitable bearing compacted structural fill or suitable native alluvium (where reduced bearing pressures are utilized), with the resulting excavations backfilled with compacted fill soils. As an alternative, lean concrete slurry (500 to 1,500 psi) may be used to backfill such isolated overexcavations.

The foundation subgrade soils should also be properly moisture conditioned to 0 to 4 percent above the Modified Proctor optimum, to a depth of at least 12 inches below bearing grade. Since it is typically not feasible to increase the moisture content of the floor slab and foundation subgrade soils once rough grading has been completed, care should be taken to maintain the moisture content of the building pad subgrade soils throughout the construction process.

Estimated Foundation Settlements

Post-construction total and differential settlements of shallow foundations designed and constructed in accordance with the previously presented recommendations are estimated to be less than 1.0 and 0.5 inches, respectively. Differential movements are expected to occur over a 30-foot span, thereby resulting in an angular distortion of less than 0.002 inches per inch.

Lateral Load Resistance

Lateral load resistance will be developed by a combination of friction acting at the base of foundations and slabs and the passive earth pressure developed by footings below grade. The following friction and passive pressure may be used to resist lateral forces:

- Passive Earth Pressure: 300 lbs/ft^3

- Friction Coefficient: 0.30

These are allowable values, and include a factor of safety. When combining friction and passive resistance, the passive pressure component should be reduced by one-third. These values assume that footings will be poured directly against compacted structural fill. The maximum allowable passive pressure is 3,000 lbs/ft^2.

6.6 Floor Slab Design and Construction

Subgrades which will support the new floor slab should be prepared in accordance with the recommendations contained in the ***Site Grading Recommendations*** section of this report. Based on the anticipated grading which will occur at this site, the floor of the new structure may be constructed as a conventional slab-on-grade supported on newly placed structural fill soils. These fill soils are expected to extend to a depth of at least 3 feet below finished pad grade. Based on geotechnical considerations, the floor slab may be designed as follows:

- Minimum slab thickness: 6 inches.

- Modulus of Subgrade Reaction: k = 150 psi/in.

- Minimum slab reinforcement: Reinforcement is not considered necessary from a geotechnical standpoint. The actual floor slab reinforcement should be determined by the structural engineer, based on the imposed slab loading.

- Slab underlayment: If moisture sensitive floor coverings will be used then minimum slab underlayment should consist of a moisture vapor barrier constructed below the entire area of the proposed slab where such moisture sensitive floor coverings are anticipated. The moisture vapor barrier should meet or exceed the Class A rating as defined by ASTM E 1745-97 and have a permeance rating less than 0.01 perms as described in ASTM E 96-95 and ASTM E 154-88. A polyolefin material such as Stego® Wrap Vapor Barrier or equivalent will meet these specifications. The moisture vapor barrier should be properly constructed in accordance with all applicable manufacturer specifications. Given that a rock free subgrade is anticipated and that a capillary break is not required, sand below the barrier is not required. The need for sand and/or the amount of sand above the moisture vapor barrier should be specified by the structural engineer or concrete contractor. The selection of sand above the barrier is not a geotechnical engineering issue and hence outside our purview. Where moisture sensitive floor coverings are not anticipated, the vapor barrier may be eliminated.

- Moisture condition the floor slab subgrade soils to 0 to 4 percent above the Modified Proctor optimum moisture content, to a depth of 12 inches. The moisture content of the floor slab subgrade soils should be verified by the geotechnical engineer within 24 hours prior to concrete placement.

- Proper concrete curing techniques should be utilized to reduce the potential for slab curling or the formation of excessive shrinkage cracks.

The actual design of the floor slab should be completed by the structural engineer to verify adequate thickness and reinforcement.

6.7 Retaining Wall Design and Construction

Although not indicated on the site plans, some small (less than 6 feet in height) retaining walls may be required to facilitate the new site grades. The parameters recommended for use in the design of these walls are presented below.

Retaining Wall Design Parameters

Based on the soil conditions encountered at the boring locations, the following parameters may be used in the design of new retaining walls for this site. We have provided parameters assuming the use of on-site soils for retaining wall backfill. The on-site soils generally consist of silty sands and sands. Based on their classification, these materials are expected to possess a friction angle of at least 30 degrees when compacted to at least 90 percent of the ASTM D-1557 maximum dry density.

If desired, SCG could provide design parameters for an alternative select backfill material behind the retaining walls. The use of select backfill material could result in lower lateral earth pressures. In order to use the design parameters for the imported select fill, this material must be placed within the entire active failure wedge. This wedge is defined as extending from the heel of the retaining wall upwards at an angle of approximately 60° from horizontal. If select backfill material behind the retaining wall is desired, SCG should be contacted for supplementary recommendations.

RETAINING WALL DESIGN PARAMETERS

Design Parameter		Soil Type
		On-site Sands and Silty Sands
Internal Friction Angle (ϕ)		30°
Unit Weight		136 lbs/ft^3
Equivalent Fluid Pressure:	Active Condition (level backfill)	45 lbs/ft^3
	Active Condition (2h:1v backfill)	73 lbs/ft^3
	At-Rest Condition (level backfill)	68 lbs/ft^3

The walls should be designed using a soil-footing coefficient of friction of 0.30 and an equivalent passive pressure of 300 lbs/ft^3. The structural engineer should incorporate appropriate factors of safety in the design of the retaining walls.

The active earth pressure may be used for the design of retaining walls that do not directly support structures or support soils that in turn support structures and which will be allowed to

deflect. The at-rest earth pressure should be used for walls that will not be allowed to deflect such as those which will support foundation bearing soils, or which will support foundation loads directly.

Where the soils on the toe side of the retaining wall are not covered by a "hard" surface such as a structure or pavement, the upper 1 foot of soil should be neglected when calculating passive resistance due to the potential for the material to become disturbed or degraded during the life of the structure.

Retaining Wall Foundation Design

The retaining wall foundations should be supported within newly placed compacted structural fill, extending to a depth of at least 3 feet below the proposed bearing grade. Foundations to support new retaining walls should be designed in accordance with the general Foundation Design Parameters presented in a previous section of this report.

Seismic Lateral Earth Pressures

In accordance with the 2019 CBC, any retaining walls more than 6 feet in height must be designed for seismic lateral earth pressures. If walls 6 feet or more are required for this site, the geotechnical engineer should be contacted for supplementary seismic lateral earth pressure recommendations.

Backfill Material

On-site soils may be used to backfill the retaining walls. However, all backfill material placed within 3 feet of the back wall face should have a particle size no greater than 3 inches. Some sorting and/or crushing operations may be required. The retaining wall backfill materials should be well graded.

It is recommended that a minimum 1-foot thick layer of free-draining granular material (less than 5 percent passing the No. 200 sieve) be placed against the face of the retaining walls. This material should extend from the top of the retaining wall footing to within 1 foot of the ground surface on the back side of the retaining wall. This material should be approved by the geotechnical engineer. In lieu of the 1-foot thick layer of free-draining material, a properly installed prefabricated drainage composite such as the MiraDRAIN 6000XL (or approved equivalent), which is specifically designed for use behind retaining walls, may be used. If the layer of free-draining material is not covered by an impermeable surface, such as a structure or pavement, a 12-inch thick layer of a low permeability soil should be placed over the backfill to reduce surface water migration to the underlying soils. The layer of free draining granular material should be separated from the backfill soils by a suitable geotextile, approved by the geotechnical engineer.

All retaining wall backfill should be placed and compacted under engineering controlled conditions in the necessary layer thicknesses to ensure an in-place density between 90 and 93 percent of the maximum dry density as determined by the Modified Proctor test (ASTM D1557-91). Care should be taken to avoid over-compaction of the soils behind the retaining walls, and the use of heavy compaction equipment should be avoided.

Subsurface Drainage

As previously indicated, the retaining wall design parameters are based upon drained backfill conditions. Consequently, some form of permanent drainage system will be necessary in conjunction with the appropriate backfill material. Subsurface drainage may consist of either:

- A weep hole drainage system typically consisting of a series of 4-inch diameter holes in the wall situated slightly above the ground surface elevation on the exposed side of the wall and at an approximate 8-foot on-center spacing. The weep holes should include a 2 cubic foot pocket of open graded gravel, surrounded by an approved geotextile fabric, at each weep hole location.

- A 4-inch diameter perforated pipe surrounded by 2 cubic feet of gravel per linear foot of drain placed behind the wall, above the retaining wall footing. The gravel layer should be wrapped in a suitable geotextile fabric to reduce the potential for migration of fines. The footing drain should be extended to daylight or tied into a storm drainage system.

6.8 Pavement Design Parameters

Site preparation in the pavement area should be completed as previously recommended in the ***Site Grading Recommendations*** section of this report. The subsequent pavement recommendations assume proper drainage and construction monitoring, and are based on either PCA or CALTRANS design parameters for a twenty (20) year design period. However, these designs also assume a routine pavement maintenance program to obtain the anticipated 20-year pavement service life.

Pavement Subgrades

It is anticipated that the new pavements will be primarily supported on a layer of compacted structural fill, consisting of scarified, thoroughly moisture conditioned and recompacted existing soils. The near-surface soils generally consist of sands and silty sands. These soils are generally considered to possess good to excellent pavement support characteristics, with R-values in the range of 40 to 60. The subsequent pavement design is therefore based upon an assumed R-value of 40. Any fill material imported to the site should have support characteristics equal to or greater than that of the on-site soils and be placed and compacted under engineering controlled conditions. It is recommended that R-value testing be performed after completion of rough grading to verify that the pavement design recommendations presented herein are valid.

Asphaltic Concrete

Presented below are the recommended thicknesses for new flexible pavement structures consisting of asphaltic concrete over a granular base. The pavement designs are based on the traffic indices (TI's) indicated. The client and/or civil engineer should verify that these TI's are representative of the anticipated traffic volumes. If the client and/or civil engineer determine that the expected traffic volume will exceed the applicable traffic index, we should be contacted for supplementary recommendations. The design traffic indices equate to the following approximate daily traffic volumes over a 20-year design life, assuming six operational traffic days per week.

Traffic Index	No. of Heavy Trucks per Day
4.0	0
5.0	1
6.0	3
7.0	11
8.0	35

For the purpose of the traffic volumes indicated above, a truck is defined as a 5-axle tractor trailer unit with one 8-kip axle and two 32-kip tandem axles. All of the traffic indices allow for 1,000 automobiles per day.

ASPHALT PAVEMENTS (R = 40)					
Materials	**Thickness (inches)**				
	Parking Stalls (TI = 4.0)	Auto Drive Lanes (TI = 5.0)	Truck Traffic		
			(TI = 6.0)	(TI = 7.0)	(TI = 8.0)
Asphalt Concrete	3	3	3½	4	5
Aggregate Base	3	4	6	7	8
Compacted Subgrade	12	12	12	12	12

The aggregate base course should be compacted to at least 95 percent of the ASTM D-1557 maximum dry density. The asphaltic concrete should be compacted to at least 95 percent of the batch plant-reported maximum density. The aggregate base course may consist of crushed aggregate base (CAB) or crushed miscellaneous base (CMB), which is a recycled gravel, asphalt and concrete material. The gradation, R-Value, Sand Equivalent, and Percentage Wear of the CAB or CMB should comply with appropriate specifications contained in the current edition of the "Greenbook" Standard Specifications for Public Works Construction.

Portland Cement Concrete

The preparation of the subgrade soils within concrete pavement areas should be performed as previously described for proposed asphalt pavement areas. The minimum recommended thicknesses for the Portland Cement Concrete pavement sections are as follows:

PORTLAND CEMENT CONCRETE PAVEMENTS (R = 40)				
Materials	**Thickness (inches)**			
	Automobile Parking and Drive Areas (TI = 5.0)	Truck Traffic Areas		
		(TI =6.0)	(TI =7.0)	(TI =8.0)
PCC	5	5	5½	6½
Compacted Subgrade (95% minimum compaction)	12	12	12	12

The concrete should have a 28-day compressive strength of at least 3,000 psi. The maximum joint spacing within all of the PCC pavements is recommended to be equal to or less than 30 times the pavement thickness. Any reinforcement within the PCC pavements should be determined by the project structural engineer.

7.0 GENERAL COMMENTS

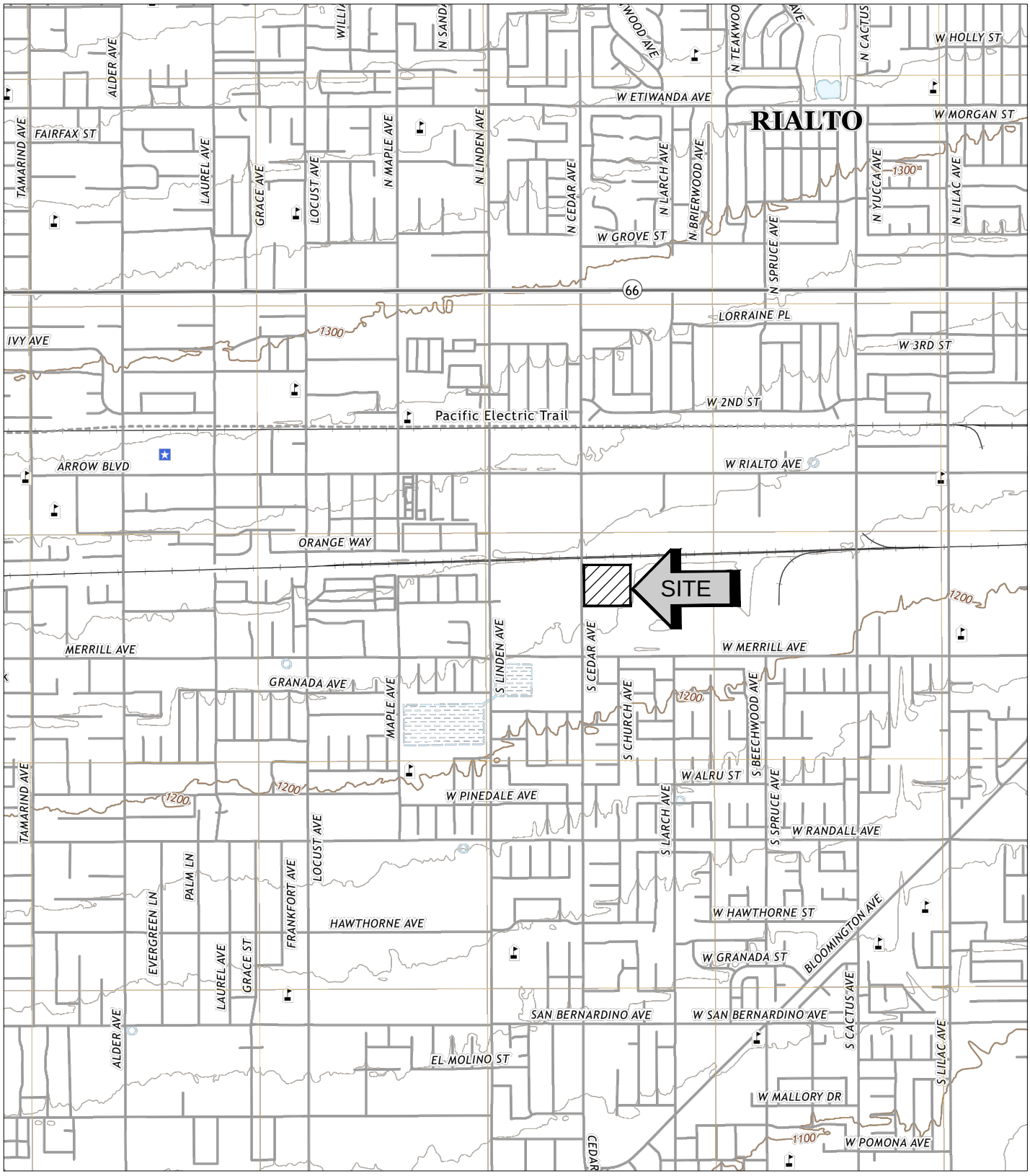
This report has been prepared as an instrument of service for use by the client, in order to aid in the evaluation of this property and to assist the architects and engineers in the design and preparation of the project plans and specifications. This report may be provided to the contractor(s) and other design consultants to disclose information relative to the project. However, this report is not intended to be utilized as a specification in and of itself, without appropriate interpretation by the project architect, civil engineer, and/or structural engineer. The reproduction and distribution of this report must be authorized by the client and Southern California Geotechnical, Inc. Furthermore, any reliance on this report by an unauthorized third party is at such party's sole risk, and we accept no responsibility for damage or loss which may occur. The client(s)' reliance upon this report is subject to the Engineering Services Agreement, incorporated into our proposal for this project.

The analysis of this site was based on a subsurface profile interpolated from limited discrete soil samples. While the materials encountered in the project area are considered to be representative of the total area, some variations should be expected between boring locations and sample depths. If the conditions encountered during construction vary significantly from those detailed herein, we should be contacted immediately to determine if the conditions alter the recommendations contained herein.

This report has been based on assumed or provided characteristics of the proposed development. It is recommended that the owner, client, architect, structural engineer, and civil engineer carefully review these assumptions to ensure that they are consistent with the characteristics of the proposed development. If discrepancies exist, they should be brought to our attention to verify that they do not affect the conclusions and recommendations contained herein. We also recommend that the project plans and specifications be submitted to our office for review to verify that our recommendations have been correctly interpreted.

The analysis, conclusions, and recommendations contained within this report have been promulgated in accordance with generally accepted professional geotechnical engineering practice. No other warranty is implied or expressed.

APPENDIX A



SOURCE: USGS TOPOGRAPHIC MAP OF THE FONTANA QUADRANGLE, SAN BERNARDINO COUNTY, CALIFORNIA, 2018.

SITE LOCATION MAP

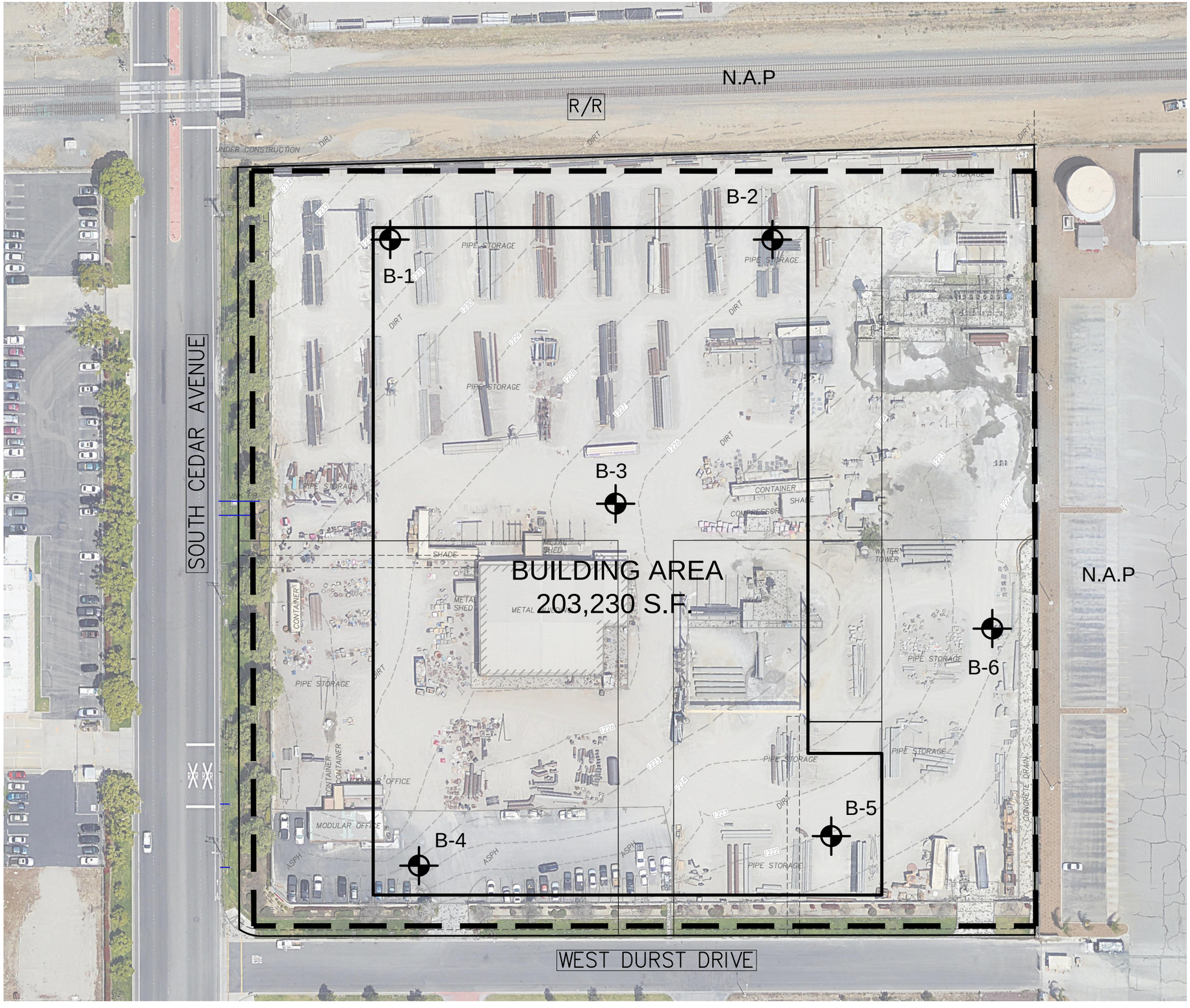
PROPOSED COMMERCIAL/INDUSTRIAL BUILDING

RIALTO, CALIFORNIA

SCALE: 1" = 2000'	
DRAWN: JLL CHKD: RGT	
SCG PROJECT 21G149-1	
PLATE 1	

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



NORTH

SoCalGeo

GEOTECHNICAL LEGEND

APPROXIMATE BORING LOCATION
(SCG PROJECT NO. 20G174-1)

NOTE: BASE MAP PREPARED BY HPA, INC.
AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH.
TOPOGRAPHIC INFORMATION PROVIDED BY THE CLIENT.

BORING LOCATION PLAN

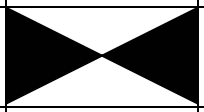
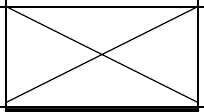
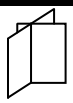
PROPOSED COMMERCIAL/INDUSTRIAL BUILDING
RIALTO, CALIFORNIA

SCALE: 1" = 80'	
DRAWN: JLL CHKD: RGT	
SCG PROJECT 21G149-1	
PLATE 2	

SOUTHERN CALIFORNIA GEOTECHNICAL

APPENDIX B

BORING LOG LEGEND

SAMPLE TYPE	GRAPHICAL SYMBOL	SAMPLE DESCRIPTION
AUGER		SAMPLE COLLECTED FROM AUGER CUTTINGS, NO FIELD MEASUREMENT OF SOIL STRENGTH. (DISTURBED)
CORE		ROCK CORE SAMPLE: TYPICALLY TAKEN WITH A DIAMOND-TIPPED CORE BARREL. TYPICALLY USED ONLY IN HIGHLY CONSOLIDATED BEDROCK.
GRAB		SOIL SAMPLE TAKEN WITH NO SPECIALIZED EQUIPMENT, SUCH AS FROM A STOCKPILE OR THE GROUND SURFACE. (DISTURBED)
CS		CALIFORNIA SAMPLER: 2-1/2 INCH I.D. SPLIT BARREL SAMPLER, LINED WITH 1-INCH HIGH BRASS RINGS. DRIVEN WITH SPT HAMMER. (RELATIVELY UNDISTURBED)
NSR		NO RECOVERY: THE SAMPLING ATTEMPT DID NOT RESULT IN RECOVERY OF ANY SIGNIFICANT SOIL OR ROCK MATERIAL.
SPT		STANDARD PENETRATION TEST: SAMPLER IS A 1.4 INCH INSIDE DIAMETER SPLIT BARREL, DRIVEN 18 INCHES WITH THE SPT HAMMER. (DISTURBED)
SH		SHELBY TUBE: TAKEN WITH A THIN WALL SAMPLE TUBE, PUSHED INTO THE SOIL AND THEN EXTRACTED. (UNDISTURBED)
VANE		VANE SHEAR TEST: SOIL STRENGTH OBTAINED USING A 4 BLADED SHEAR DEVICE. TYPICALLY USED IN SOFT CLAYS-NO SAMPLE RECOVERED.

COLUMN DESCRIPTIONS

DEPTH: Distance in feet below the ground surface.

SAMPLE: Sample Type as depicted above.

BLOW COUNT: Number of blows required to advance the sampler 12 inches using a 140 lb hammer with a 30-inch drop. 50/3" indicates penetration refusal (>50 blows) at 3 inches. WH indicates that the weight of the hammer was sufficient to push the sampler 6 inches or more.

POCKET PEN.: Approximate shear strength of a cohesive soil sample as measured by pocket penetrometer.

GRAPHIC LOG: Graphic Soil Symbol as depicted on the following page.

DRY DENSITY: Dry density of an undisturbed or relatively undisturbed sample in lbs/ft^3.

MOISTURE CONTENT: Moisture content of a soil sample, expressed as a percentage of the dry weight.

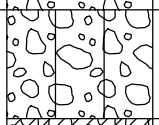
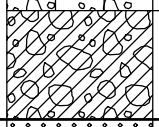
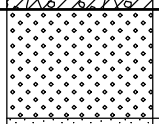
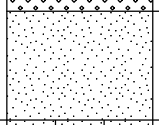
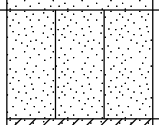
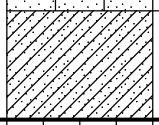
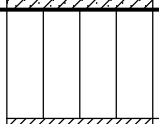
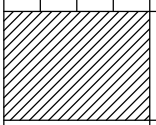
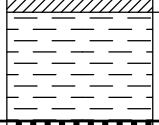
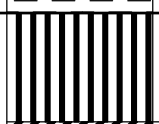
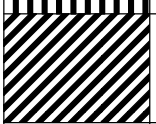
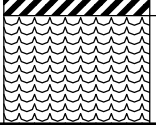
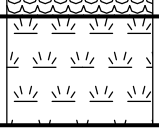
LIQUID LIMIT: The moisture content above which a soil behaves as a liquid.

PLASTIC LIMIT: The moisture content above which a soil behaves as a plastic.

PASSING #200 SIEVE: The percentage of the sample finer than the #200 standard sieve.

UNCONFINED SHEAR: The shear strength of a cohesive soil sample, as measured in the unconfined state.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-1

JOB NO.: 20G174-1
PROJECT: Proposed C/I Building
LOCATION: Rialto, California

DRILLING DATE: 7/13/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jose Zuniga

WATER DEPTH: Dry
CAVE DEPTH: 20 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		28			ALLUVIUM: Brown Silty fine Sand, trace medium Sand, trace fine to coarse Gravel, micaceous, medium dense-damp	112	4					
		19			Brown Silty fine to coarse Sand, trace fine to coarse Gravel, medium dense-dry to damp	122	3					
5		28			Brown fine to coarse Sand, trace to little fine to coarse Gravel, medium dense-damp	117	3					
		19			Brown Silty fine to coarse Sand, trace fine Gravel, medium dense-damp	117	5					
		20				118	6					
10												
		63			Light Gray Brown Gravelly fine to coarse Sand, trace Silt, very dense-damp		3					
15												
		59					2					
20												
		81					2					
25					Boring Terminated at 25 feet							

TBL 20G174-1.GPJ SOCALGEO.GDT 3/31/21

TEST BORING LOG

PLATE B-1

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-2

JOB NO.: 20G174-1
PROJECT: Proposed C/I Building
LOCATION: Rialto, California

DRILLING DATE: 7/13/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jose Zuniga

WATER DEPTH: Dry
CAVE DEPTH: 16 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
0					ALLUVIUM: Light Gray Brown Gravelly fine to coarse Sand, little Silt, dense to very dense-dry to damp							
		33					1					
		36					2					
5												
		61										No Sample Recovery
		36					4					
10												
		54					3					
15												
		60			@ 18½ feet, little to some coarse Gravel		3					
20					Boring Terminated at 20 feet							

TBL 20G174-1.GPJ SOCALGEO.GDT 3/31/21

TEST BORING LOG

PLATE B-2

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-3

JOB NO.: 20G174-1
PROJECT: Proposed C/I Building
LOCATION: Rialto, California

DRILLING DATE: 7/13/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jose Zuniga

WATER DEPTH: Dry
CAVE DEPTH: 20 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		25			FILL: Brown Silty fine Sand, trace medium to coarse Sand, trace fine Gravel, medium dense-damp	114	5					
		21			ALLUVIUM: Brown fine to medium Sand, trace coarse Sand, trace fine Gravel, trace Silt, medium dense-damp	116	3					
5		41			Brown Gravelly fine to coarse Sand, trace Silt, medium dense-damp	118	3					
		46			@ 7 to 15 feet, trace Iron oxide staining, dense	118	4					
		61				113	5					
10												
		37					3					
15												
		73			@ 18½ feet, very dense		3					
20					Boring Terminated at 20 feet							

TBL 20G174-1.GPJ SOCALGEO.GDT 3/31/21

TEST BORING LOG

PLATE B-3

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-4

JOB NO.: 20G174-1
PROJECT: Proposed C/I Building
LOCATION: Rialto, California

DRILLING DATE: 7/13/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jose Zuniga

WATER DEPTH: Dry
CAVE DEPTH: 16 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
					1± inch Asphaltic concrete, 6± inches Aggregate Base							
					FILL: Light Brown Gravelly fine to coarse Sand, little silt, damp							No Sample Recovery @ 0 to 5 feet, due to possible utility
5												
		47			ALLUVIUM: Light Gray Brown Gravelly fine to coarse Sand, dense to very dense-damp		3					
		50					3					
10												
		37					4					
15												
					Brown Silty fine Sand, trace medium to coarse Sand, very dense-damp							
		78					7					
20					Boring Terminated at 20 feet							

TBL 20G174-1.GPJ SOCALGEO.GDT 3/31/21

TEST BORING LOG **PLATE B-4**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-5

JOB NO.: 20G174-1
PROJECT: Proposed C/I Building
LOCATION: Rialto, California

DRILLING DATE: 7/13/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jose Zuniga

WATER DEPTH: Dry
CAVE DEPTH: 20 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		13			FILL: Brown Silty fine Sand, trace fine Gravel, medium dense-damp	117	7					
		23			ALLUVIUM: Brown fine to coarse Sand, trace Silt, little fine to coarse Gravel, medium dense-dry to damp	116	2					
5		50/5"			Brown Silty fine to coarse Sand, little fine to coarse Gravel, dense-damp	111	4					
		40			Gray Brown Gravelly fine to coarse Sand, medium dense to dense-damp	121	3					
10		62				127	3					
15		33				121	4					
		54			@ 18½ to 25 feet, trace to little Silt, very dense		3					
20												
		75					2					
25					Boring Terminated at 25 feet							

TBL 20G174-1.GPJ SOCALGEO.GDT 3/31/21

TEST BORING LOG

PLATE B-5

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-6

JOB NO.: 20G174-1
PROJECT: Proposed C/I Building
LOCATION: Rialto, California

DRILLING DATE: 7/13/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jose Zuniga

WATER DEPTH: Dry
CAVE DEPTH: 14 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		40			FILL: Brown Silty fine to coarse Sand, trace fine Gravel, dense-dry to damp		2					
		36			ALLUVIUM: Brown Silty fine to coarse Sand, trace fine Gravel, dense-dry to damp		2					
5		24			Brown fine to coarse Sand, little fine to coarse Gravel, trace Silt, medium dense-dry to damp		2					
		45			@ 8½ to 20 feet, dense to very dense		2					
10												
		63					2					
15												
		61					2					
20					Boring Terminated at 20 feet							

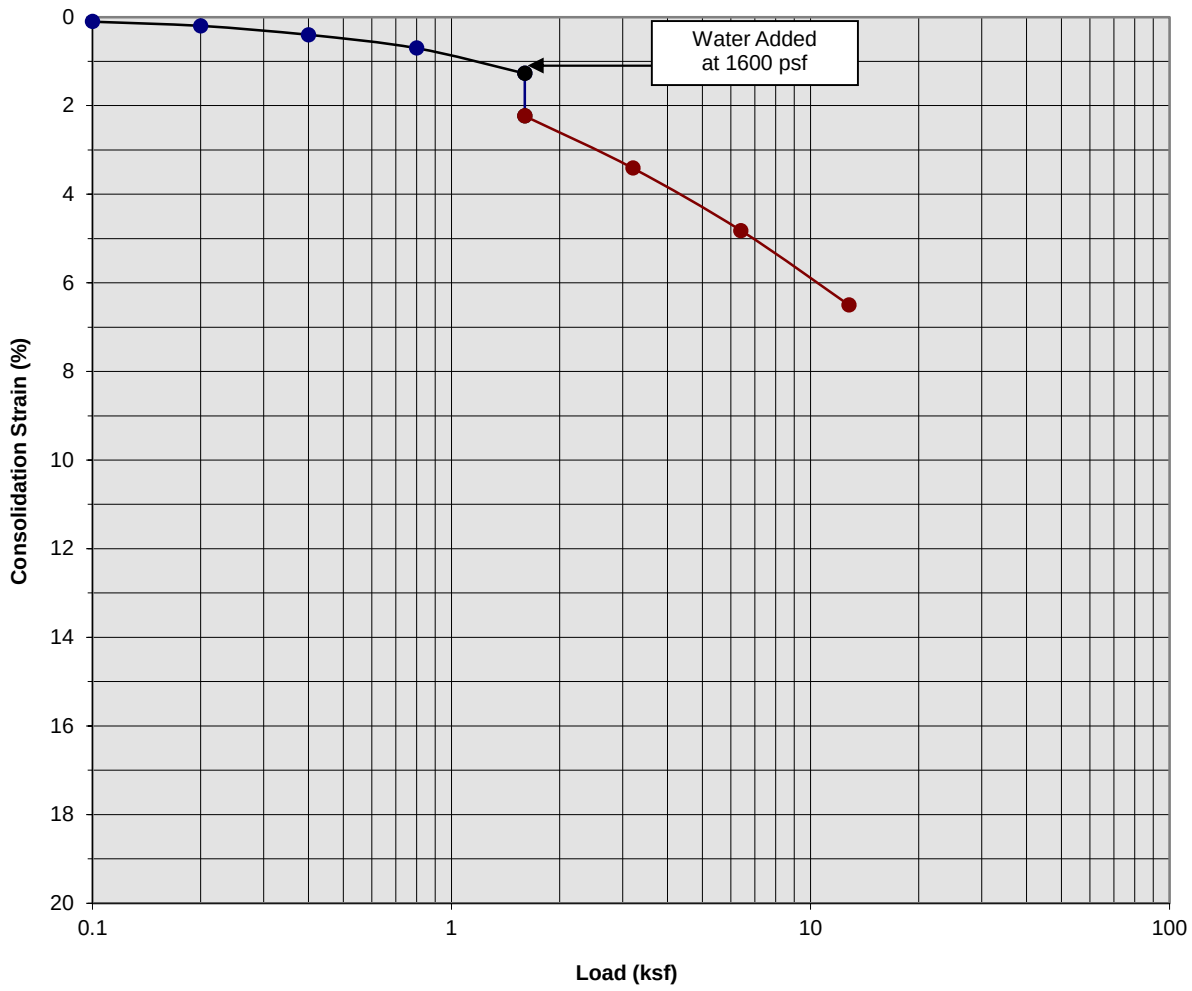
TBL 20G174-1.GPJ SOCALGEO.GDT 3/31/21

TEST BORING LOG

PLATE B-6

APPENDIX C

Consolidation/Collapse Test Results



Classification: Brown Silty fine to coarse Sand, trace fine to coarse Gravel

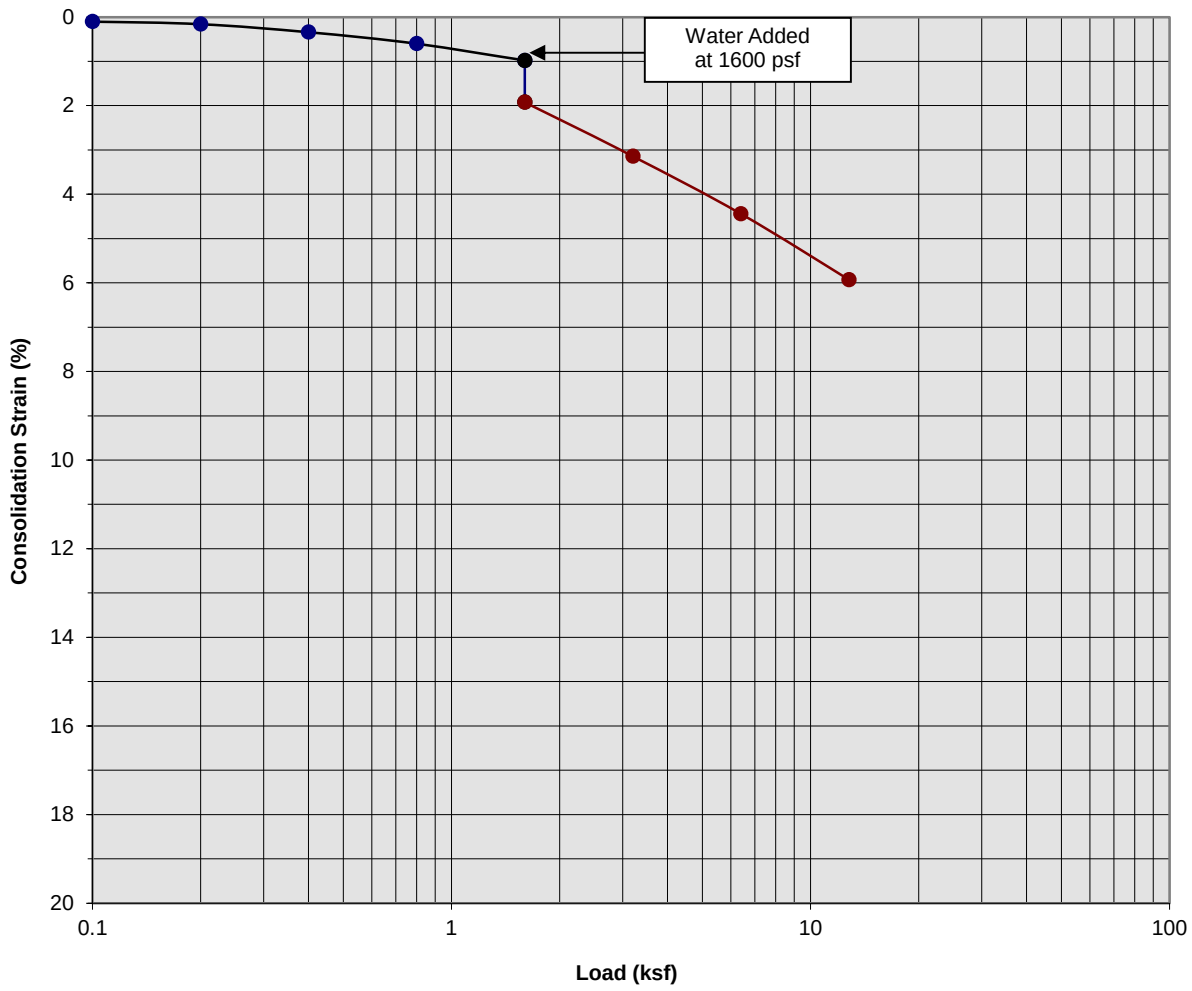
Boring Number:	B-1	Initial Moisture Content (%)	4
Sample Number:	---	Final Moisture Content (%)	11
Depth (ft)	3 to 4	Initial Dry Density (pcf)	121.5
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	128.7
Specimen Thickness (in)	1.0	Percent Collapse (%)	0.96

Proposed Commercial/Industrial Building
Rialto, California
Project No. 20G174-1

PLATE C- 1

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown fine to coarse Sand, trace to little fine to coarse Gravel

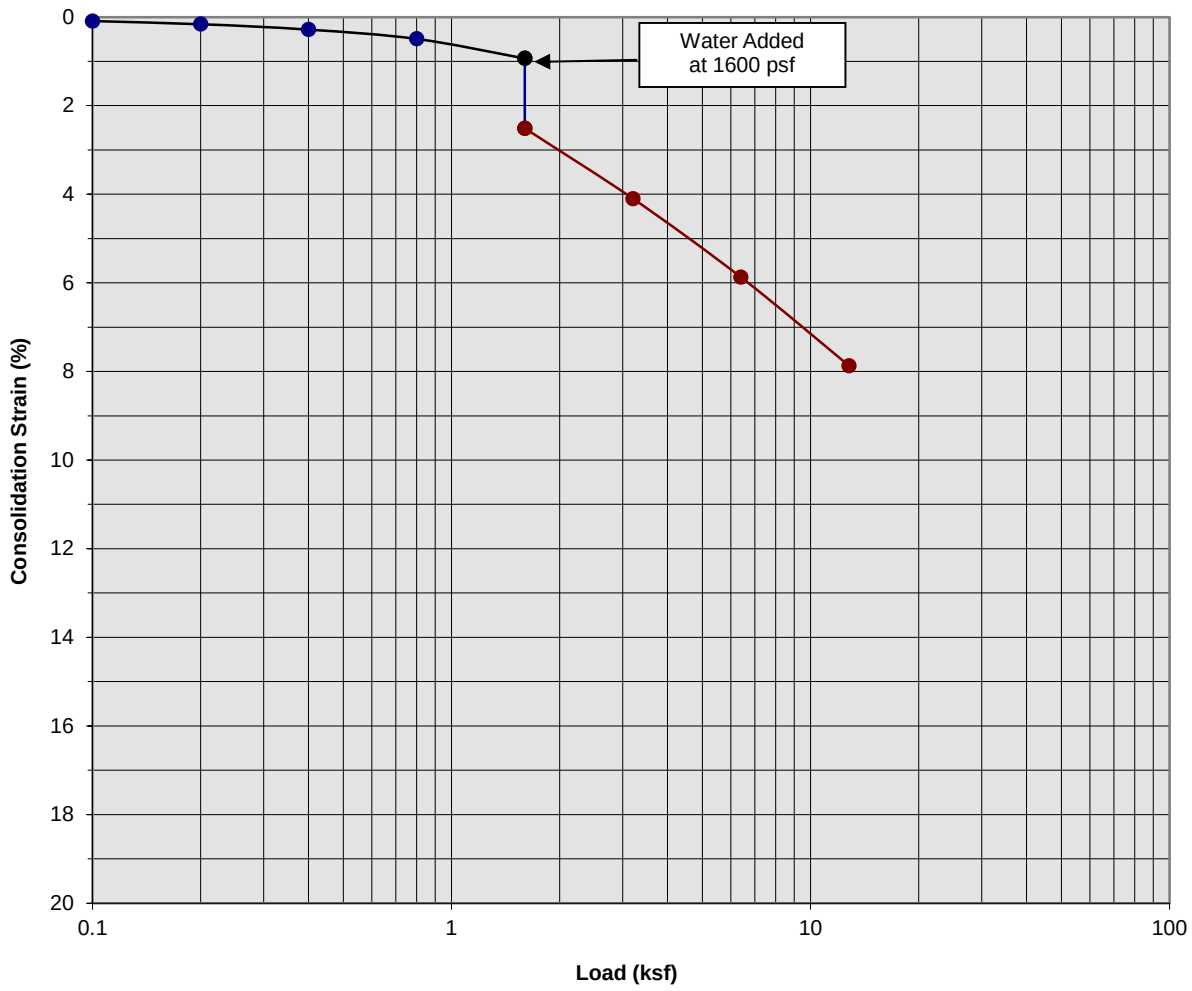
Boring Number:	B-1	Initial Moisture Content (%)	3
Sample Number:	---	Final Moisture Content (%)	11
Depth (ft)	5 to 6	Initial Dry Density (pcf)	117.9
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	124.9
Specimen Thickness (in)	1.0	Percent Collapse (%)	0.94

Proposed Commercial/Industrial Building
Rialto, California
Project No. 20G174-1

PLATE C- 2

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown Silty fine to coarse Sand, trace fine Gravel

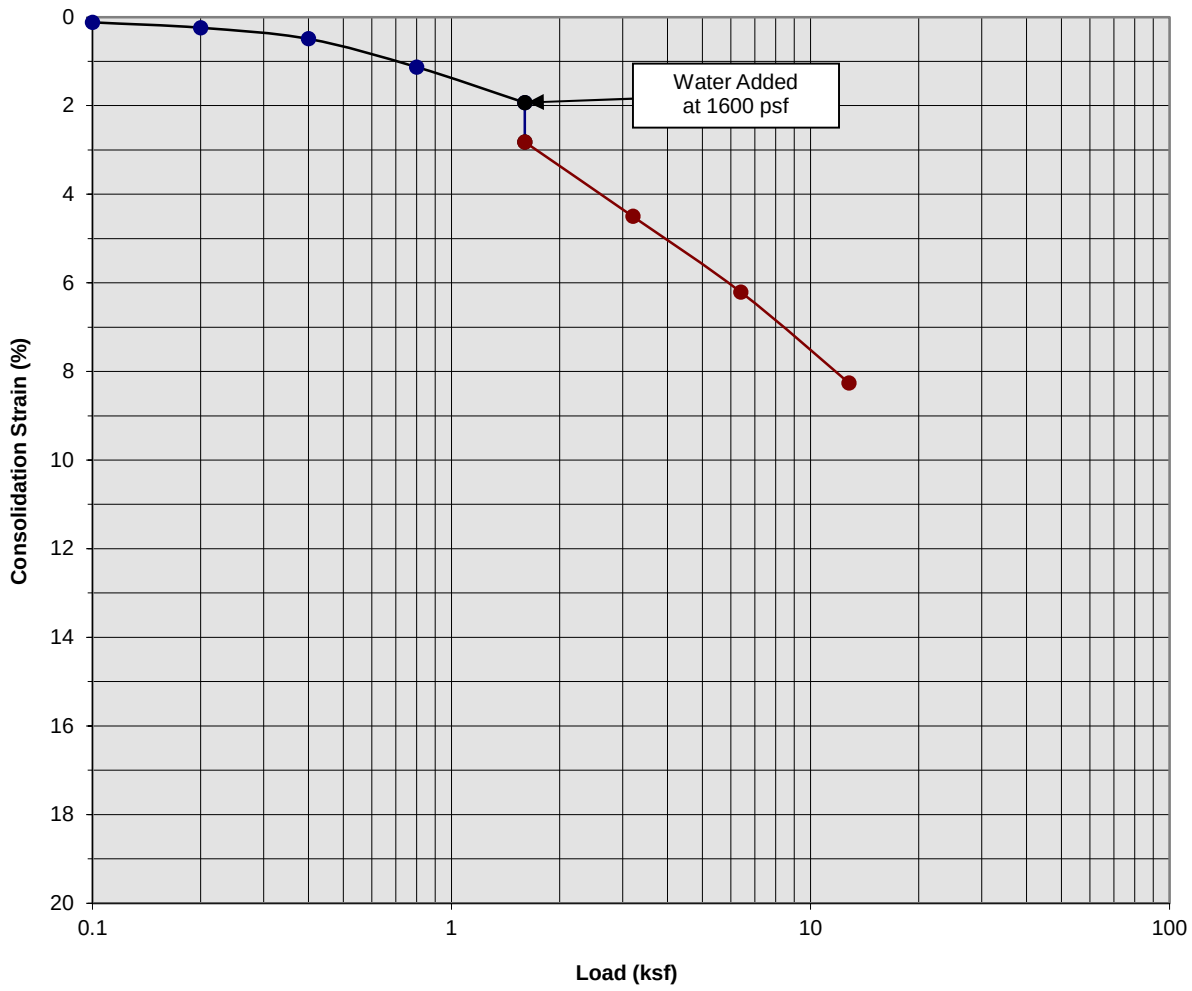
Boring Number:	B-1	Initial Moisture Content (%)	5
Sample Number:	---	Final Moisture Content (%)	11
Depth (ft)	7 to 8	Initial Dry Density (pcf)	117.8
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	127.2
Specimen Thickness (in)	1.0	Percent Collapse (%)	1.58

Proposed Commercial/Industrial Building
Rialto, California
Project No. 20G174-1

PLATE C- 3

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown Silty fine to coarse Sand, trace fine Gravel

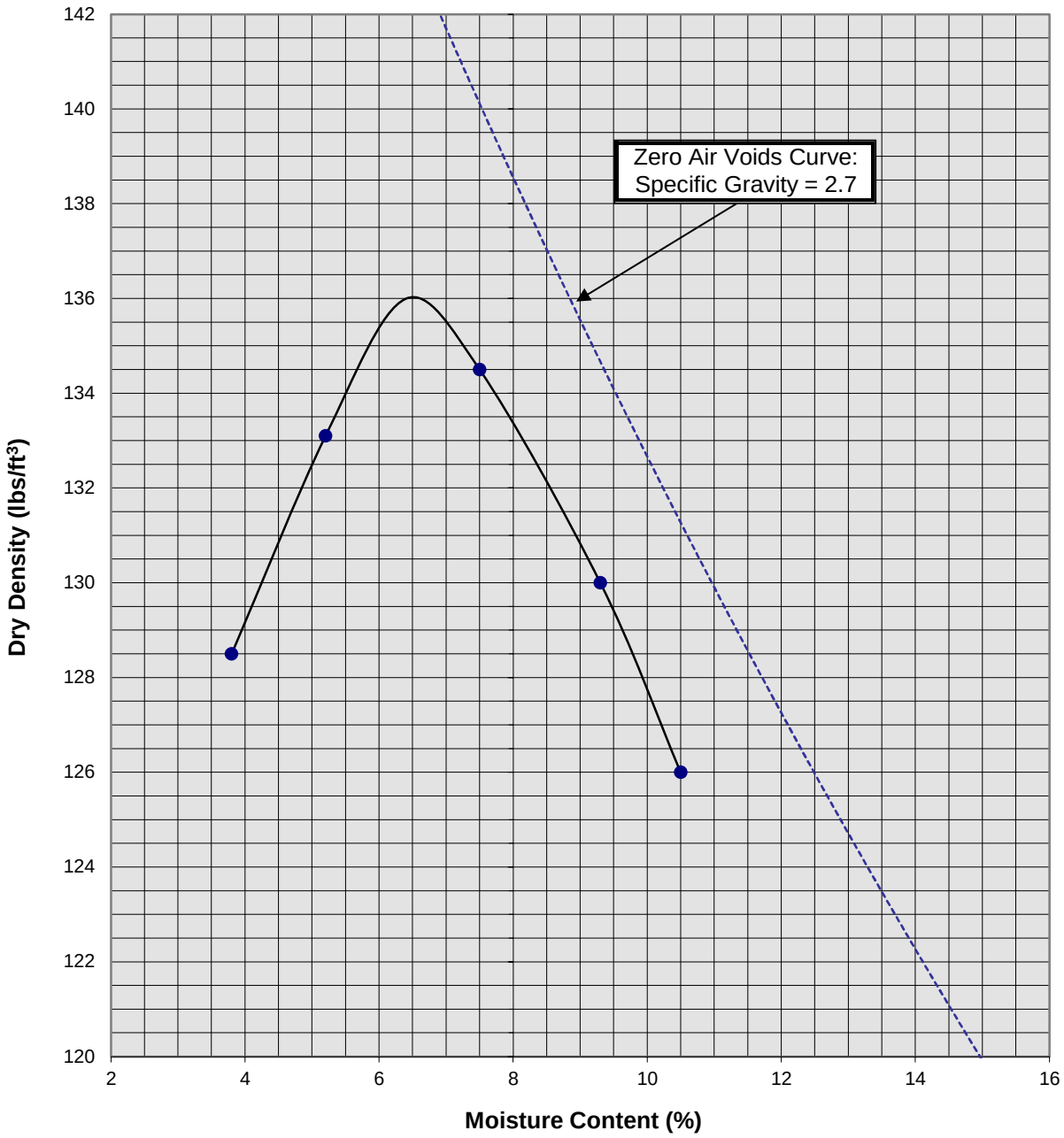
Boring Number:	B-1	Initial Moisture Content (%)	5
Sample Number:	---	Final Moisture Content (%)	11
Depth (ft)	9 to 10	Initial Dry Density (pcf)	117.4
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	127.3
Specimen Thickness (in)	1.0	Percent Collapse (%)	0.89

Proposed Commercial/Industrial Building
Rialto, California
Project No. 20G174-1

PLATE C- 4

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Moisture/Density Relationship
ASTM D-1557



Soil ID Number	B-6 @ 0-5'
Optimum Moisture (%)	6.5
Maximum Dry Density (pcf)	136
Soil Classification	Brown Silty fine to coarse Sand, trace fine Gravel

Proposed Commercial/Industrial Building
Rialto, California
Project No. 20G174-1

PLATE C-5

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

APPENDIX D

GRADING GUIDE SPECIFICATIONS

These grading guide specifications are intended to provide typical procedures for grading operations. They are intended to supplement the recommendations contained in the geotechnical investigation report for this project. Should the recommendations in the geotechnical investigation report conflict with the grading guide specifications, the more site specific recommendations in the geotechnical investigation report will govern.

General

- The Earthwork Contractor is responsible for the satisfactory completion of all earthwork in accordance with the plans and geotechnical reports, and in accordance with city, county, and applicable building codes.

- The Geotechnical Engineer is the representative of the Owner/Builder for the purpose of implementing the report recommendations and guidelines. These duties are not intended to relieve the Earthwork Contractor of any responsibility to perform in a workman-like manner, nor is the Geotechnical Engineer to direct the grading equipment or personnel employed by the Contractor.

- The Earthwork Contractor is required to notify the Geotechnical Engineer of the anticipated work and schedule so that testing and inspections can be provided. If necessary, work may be stopped and redone if personnel have not been scheduled in advance.

- The Earthwork Contractor is required to have suitable and sufficient equipment on the job-site to process, moisture condition, mix and compact the amount of fill being placed to the approved compaction. In addition, suitable support equipment should be available to conform with recommendations and guidelines in this report.

- Canyon cleanouts, overexcavation areas, processed ground to receive fill, key excavations, subdrains and benches should be observed by the Geotechnical Engineer prior to placement of any fill. It is the Earthwork Contractor's responsibility to notify the Geotechnical Engineer of areas that are ready for inspection.

- Excavation, filling, and subgrade preparation should be performed in a manner and sequence that will provide drainage at all times and proper control of erosion. Precipitation, springs, and seepage water encountered shall be pumped or drained to provide a suitable working surface. The Geotechnical Engineer must be informed of springs or water seepage encountered during grading or foundation construction for possible revision to the recommended construction procedures and/or installation of subdrains.

Site Preparation

- The Earthwork Contractor is responsible for all clearing, grubbing, stripping and site preparation for the project in accordance with the recommendations of the Geotechnical Engineer.

- If any materials or areas are encountered by the Earthwork Contractor which are suspected of having toxic or environmentally sensitive contamination, the Geotechnical Engineer and Owner/Builder should be notified immediately.

- Major vegetation should be stripped and disposed of off-site. This includes trees, brush, heavy grasses and any materials considered unsuitable by the Geotechnical Engineer.

- Underground structures such as basements, cesspools or septic disposal systems, mining shafts, tunnels, wells and pipelines should be removed under the inspection of the Geotechnical Engineer and recommendations provided by the Geotechnical Engineer and/or city, county or state agencies. If such structures are known or found, the Geotechnical Engineer should be notified as soon as possible so that recommendations can be formulated.

- Any topsoil, slopewash, colluvium, alluvium and rock materials which are considered unsuitable by the Geotechnical Engineer should be removed prior to fill placement.

- Remaining voids created during site clearing caused by removal of trees, foundations basements, irrigation facilities, etc., should be excavated and filled with compacted fill.

- Subsequent to clearing and removals, areas to receive fill should be scarified to a depth of 10 to 12 inches, moisture conditioned and compacted

- The moisture condition of the processed ground should be at or slightly above the optimum moisture content as determined by the Geotechnical Engineer. Depending upon field conditions, this may require air drying or watering together with mixing and/or discing.

Compacted Fills

- Soil materials imported to or excavated on the property may be utilized in the fill, provided each material has been determined to be suitable in the opinion of the Geotechnical Engineer. Unless otherwise approved by the Geotechnical Engineer, all fill materials shall be free of deleterious, organic, or frozen matter, shall contain no chemicals that may result in the material being classified as “contaminated,” and shall be very low to non-expansive with a maximum expansion index (EI) of 50. The top 12 inches of the compacted fill should have a maximum particle size of 3 inches, and all underlying compacted fill material a maximum 6-inch particle size, except as noted below.

- All soils should be evaluated and tested by the Geotechnical Engineer. Materials with high expansion potential, low strength, poor gradation or containing organic materials may require removal from the site or selective placement and/or mixing to the satisfaction of the Geotechnical Engineer.

- Rock fragments or rocks less than 6 inches in their largest dimensions, or as otherwise determined by the Geotechnical Engineer, may be used in compacted fill, provided the distribution and placement is satisfactory in the opinion of the Geotechnical Engineer.

- Rock fragments or rocks greater than 12 inches should be taken off-site or placed in accordance with recommendations and in areas designated as suitable by the Geotechnical Engineer. These materials should be placed in accordance with Plate D-8 of these Grading Guide Specifications and in accordance with the following recommendations:

    - Rocks 12 inches or more in diameter should be placed in rows at least 15 feet apart, 15 feet from the edge of the fill, and 10 feet or more below subgrade. Spaces should be left between each rock fragment to provide for placement and compaction of soil around the fragments.

    - Fill materials consisting of soil meeting the minimum moisture content requirements and free of oversize material should be placed between and over the rows of rock or

concrete. Ample water and compactive effort should be applied to the fill materials as they are placed in order that all of the voids between each of the fragments are filled and compacted to the specified density.

- Subsequent rows of rocks should be placed such that they are not directly above a row placed in the previous lift of fill. A minimum 5-foot offset between rows is recommended.

- To facilitate future trenching, oversized material should not be placed within the range of foundation excavations, future utilities or other underground construction unless specifically approved by the soil engineer and the developer/owner representative.

- Fill materials approved by the Geotechnical Engineer should be placed in areas previously prepared to receive fill and in evenly placed, near horizontal layers at about 6 to 8 inches in loose thickness, or as otherwise determined by the Geotechnical Engineer for the project.

- Each layer should be moisture conditioned to optimum moisture content, or slightly above, as directed by the Geotechnical Engineer. After proper mixing and/or drying, to evenly distribute the moisture, the layers should be compacted to at least 90 percent of the maximum dry density in compliance with ASTM D-1557-78 unless otherwise indicated.

- Density and moisture content testing should be performed by the Geotechnical Engineer at random intervals and locations as determined by the Geotechnical Engineer. These tests are intended as an aid to the Earthwork Contractor, so he can evaluate his workmanship, equipment effectiveness and site conditions. The Earthwork Contractor is responsible for compaction as required by the Geotechnical Report(s) and governmental agencies.

- Fill areas unused for a period of time may require moisture conditioning, processing and recompaction prior to the start of additional filling. The Earthwork Contractor should notify the Geotechnical Engineer of his intent so that an evaluation can be made.

- Fill placed on ground sloping at a 5-to-1 inclination (horizontal-to-vertical) or steeper should be benched into bedrock or other suitable materials, as directed by the Geotechnical Engineer. Typical details of benching are illustrated on Plates D-2, D-4, and D-5.

- Cut/fill transition lots should have the cut portion overexcavated to a depth of at least 3 feet and rebuilt with fill (see Plate D-1), as determined by the Geotechnical Engineer.

- All cut lots should be inspected by the Geotechnical Engineer for fracturing and other bedrock conditions. If necessary, the pads should be overexcavated to a depth of 3 feet and rebuilt with a uniform, more cohesive soil type to impede moisture penetration.

- Cut portions of pad areas above buttresses or stabilizations should be overexcavated to a depth of 3 feet and rebuilt with uniform, more cohesive compacted fill to impede moisture penetration.

- Non-structural fill adjacent to structural fill should typically be placed in unison to provide lateral support. Backfill along walls must be placed and compacted with care to ensure that excessive unbalanced lateral pressures do not develop. The type of fill material placed adjacent to below grade walls must be properly tested and approved by the Geotechnical Engineer with consideration of the lateral earth pressure used in the design.

Foundations

- The foundation influence zone is defined as extending one foot horizontally from the outside edge of a footing, and proceeding downward at a ½ horizontal to 1 vertical (0.5:1) inclination.

- Where overexcavation beneath a footing subgrade is necessary, it should be conducted so as to encompass the entire foundation influence zone, as described above.

- Compacted fill adjacent to exterior footings should extend at least 12 inches above foundation bearing grade. Compacted fill within the interior of structures should extend to the floor subgrade elevation.

Fill Slopes

- The placement and compaction of fill described above applies to all fill slopes. Slope compaction should be accomplished by overfilling the slope, adequately compacting the fill in even layers, including the overfilled zone and cutting the slope back to expose the compacted core

- Slope compaction may also be achieved by backrolling the slope adequately every 2 to 4 vertical feet during the filling process as well as requiring the earth moving and compaction equipment to work close to the top of the slope. Upon completion of slope construction, the slope face should be compacted with a sheepsfoot connected to a sideboom and then grid rolled. This method of slope compaction should only be used if approved by the Geotechnical Engineer.

- Sandy soils lacking in adequate cohesion may be unstable for a finished slope condition and therefore should not be placed within 15 horizontal feet of the slope face.

- All fill slopes should be keyed into bedrock or other suitable material. Fill keys should be at least 15 feet wide and inclined at 2 percent into the slope. For slopes higher than 30 feet, the fill key width should be equal to one-half the height of the slope (see Plate D-5).

- All fill keys should be cleared of loose slough material prior to geotechnical inspection and should be approved by the Geotechnical Engineer and governmental agencies prior to filling.

- The cut portion of fill over cut slopes should be made first and inspected by the Geotechnical Engineer for possible stabilization requirements. The fill portion should be adequately keyed through all surficial soils and into bedrock or suitable material. Soils should be removed from the transition zone between the cut and fill portions (see Plate D-2).

Cut Slopes

- All cut slopes should be inspected by the Geotechnical Engineer to determine the need for stabilization. The Earthwork Contractor should notify the Geotechnical Engineer when slope cutting is in progress at intervals of 10 vertical feet. Failure to notify may result in a delay in recommendations.

- Cut slopes exposing loose, cohesionless sands should be reported to the Geotechnical Engineer for possible stabilization recommendations.

- All stabilization excavations should be cleared of loose slough material prior to geotechnical inspection. Stakes should be provided by the Civil Engineer to verify the location and dimensions of the key. A typical stabilization fill detail is shown on Plate D-5.

- Stabilization key excavations should be provided with subdrains. Typical subdrain details are shown on Plates D-6.

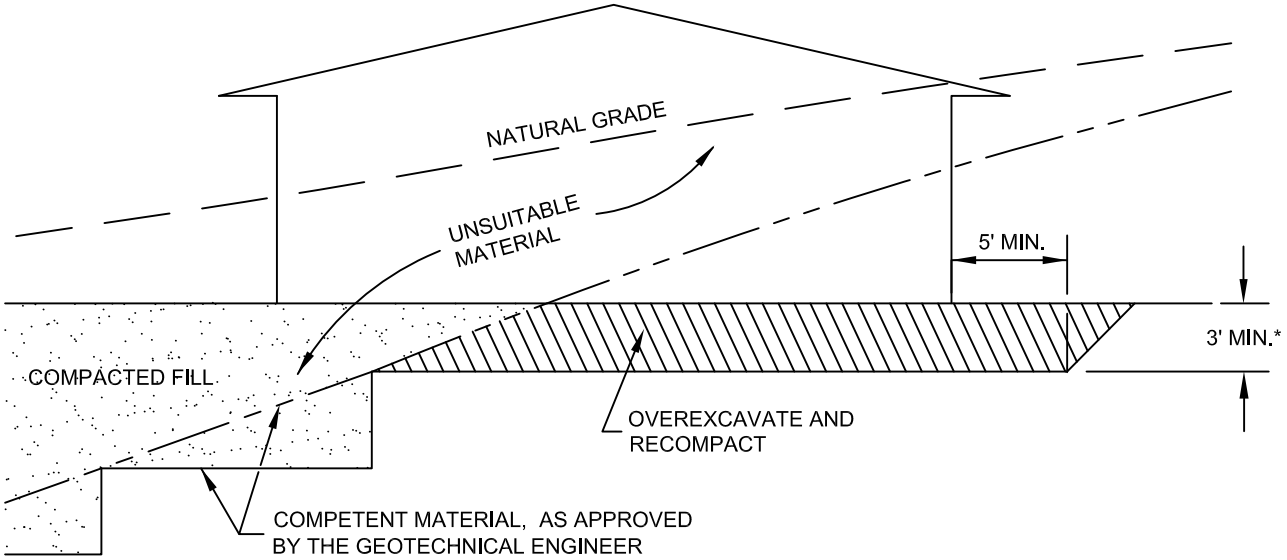
Subdrains

- Subdrains may be required in canyons and swales where fill placement is proposed. Typical subdrain details for canyons are shown on Plate D-3. Subdrains should be installed after approval of removals and before filling, as determined by the Soils Engineer.

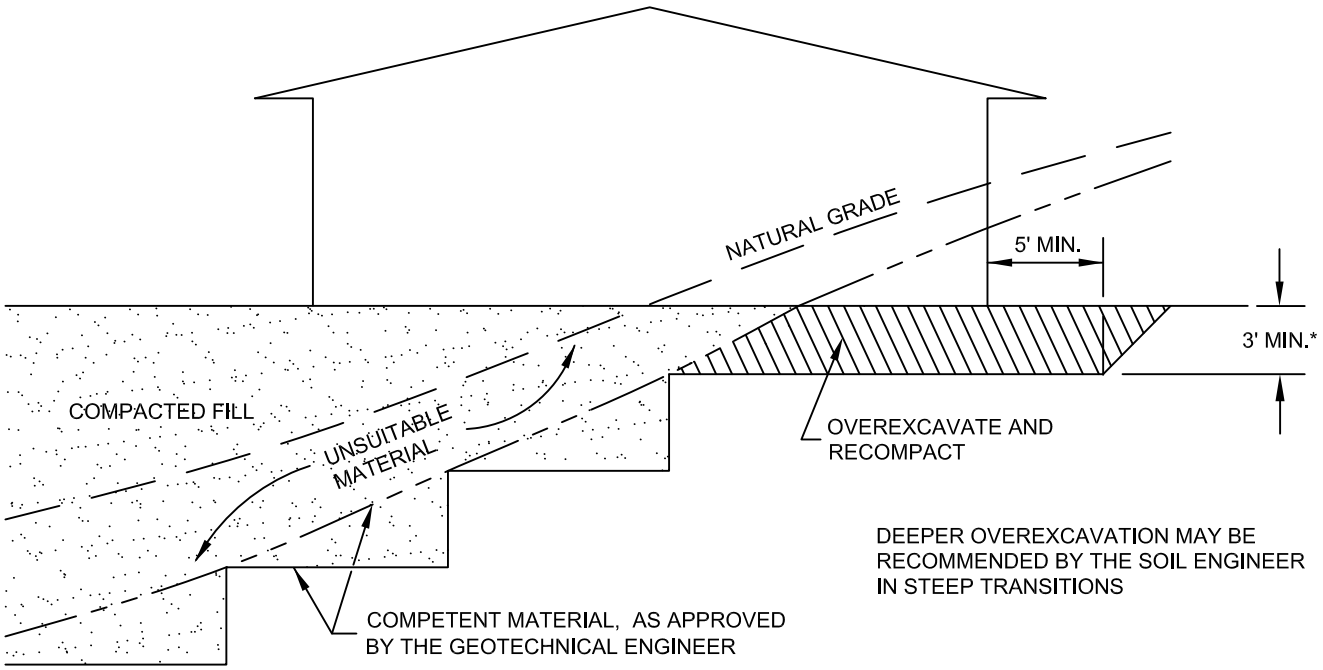
- Plastic pipe may be used for subdrains provided it is Schedule 40 or SDR 35 or equivalent. Pipe should be protected against breakage, typically by placement in a square-cut (backhoe) trench or as recommended by the manufacturer.

- Filter material for subdrains should conform to CALTRANS Specification 68-1.025 or as approved by the Geotechnical Engineer for the specific site conditions. Clean ¾-inch crushed rock may be used provided it is wrapped in an acceptable filter cloth and approved by the Geotechnical Engineer. Pipe diameters should be 6 inches for runs up to 500 feet and 8 inches for the downstream continuations of longer runs. Four-inch diameter pipe may be used in buttress and stabilization fills.

CUT LOT



CUT/FILL LOT (TRANSITION)



*SEE TEXT OF REPORT FOR SPECIFIC RECOMMENDATION. ACTUAL DEPTH OF OVEREXCAVATION MAY BE GREATER.

TRANSITION LOT DETAIL

GRADING GUIDE SPECIFICATIONS

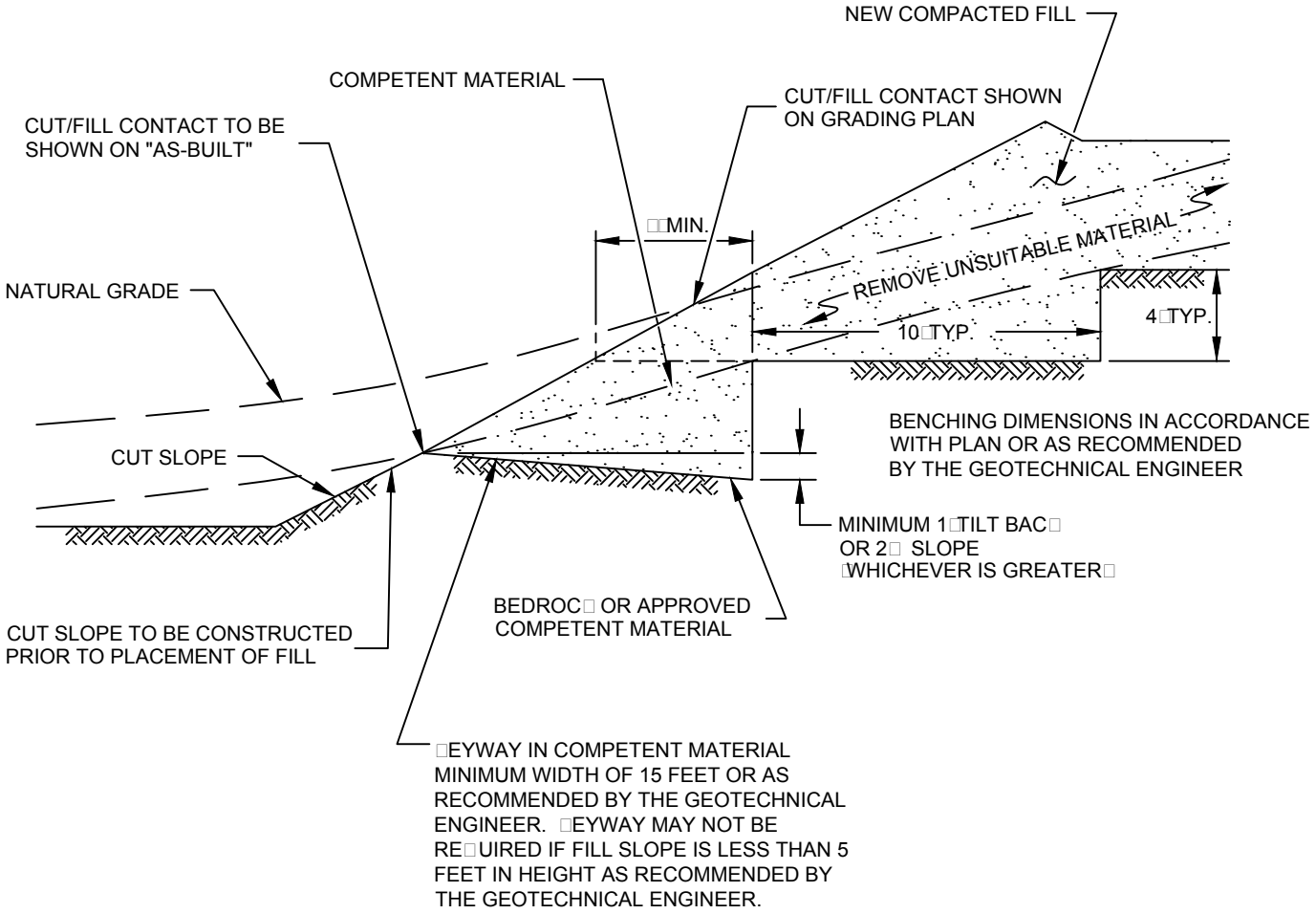
NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-1

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



FILL ABOVE CUT SLOPE DETAIL

GRADING GUIDE SPECIFICATIONS

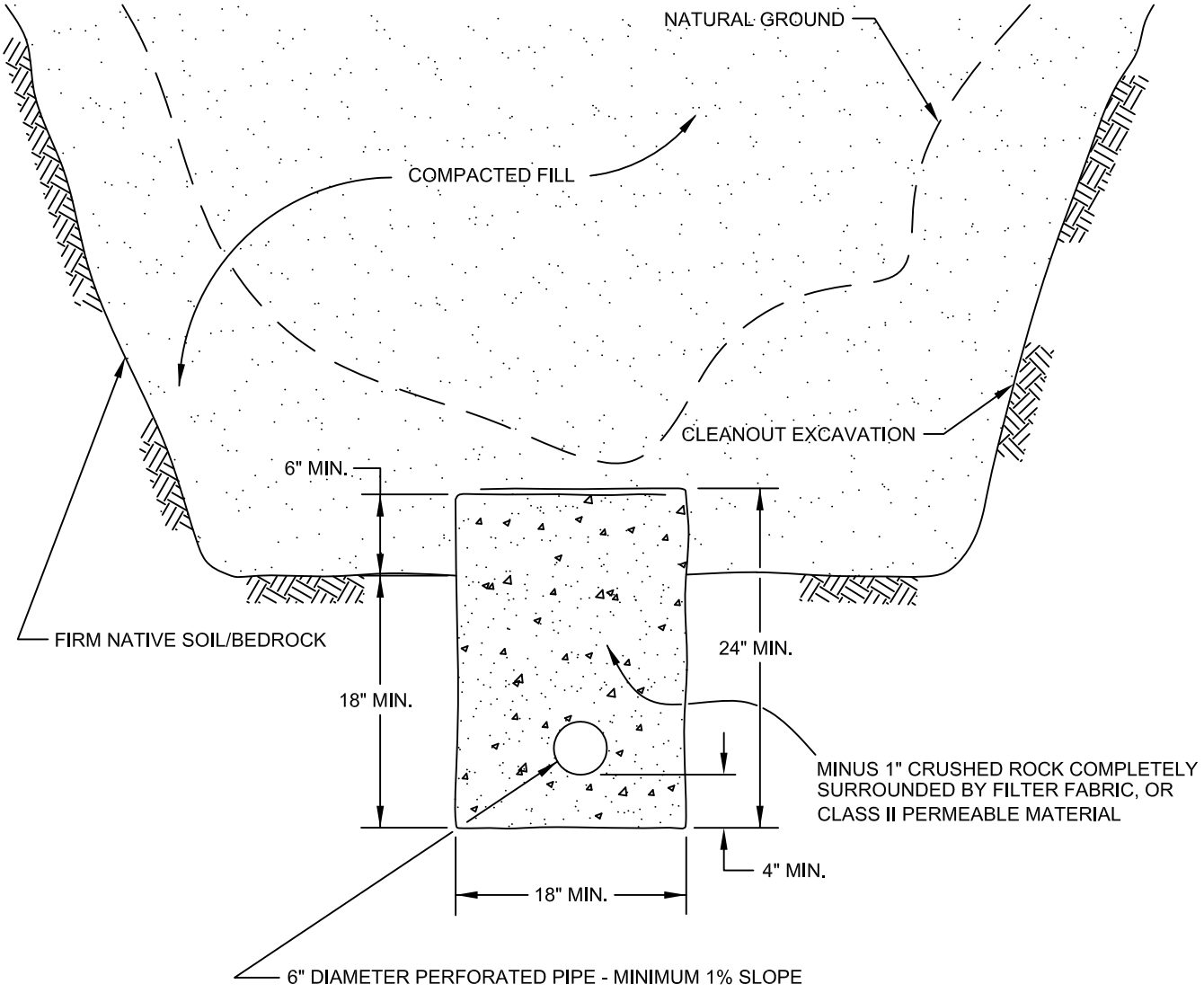
NOT TO SCALE

DRAWN JAS
CH D G M

PLATE D-2

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



PIPE MATERIAL	DEPTH OF FILL OVER SUBDRAIN
ADS (CORRUGATED POLETHYLENE)	8
TRANSITE UNDERDRAIN	20
PVC OR ABS: SDR 35	35
SDR 21	100

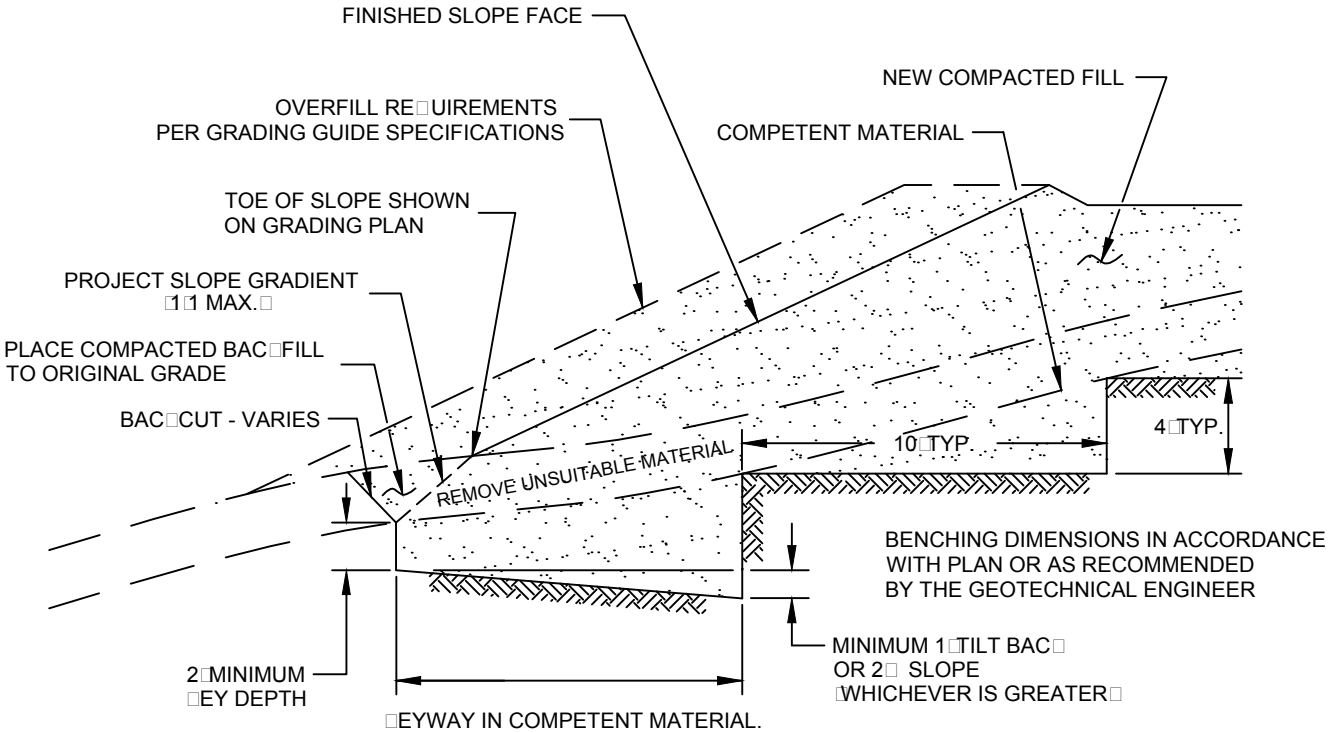
SCHEMATIC ONLY
NOT TO SCALE

CANYON SUBDRAIN DETAIL
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE
DRAWN: JAS
CHKD: GKM

PLATE D-3

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



NOTE□
BENCHING SHALL BE RE□UIRED
WHEN NATURAL SLOPES ARE
E□UAL TO OR STEEPER THAN 5□1
OR WHEN RECOMMENDED BY
THE GEOTECHNICAL ENGINEER.

FILL ABOVE NATURAL SLOPE DETAIL

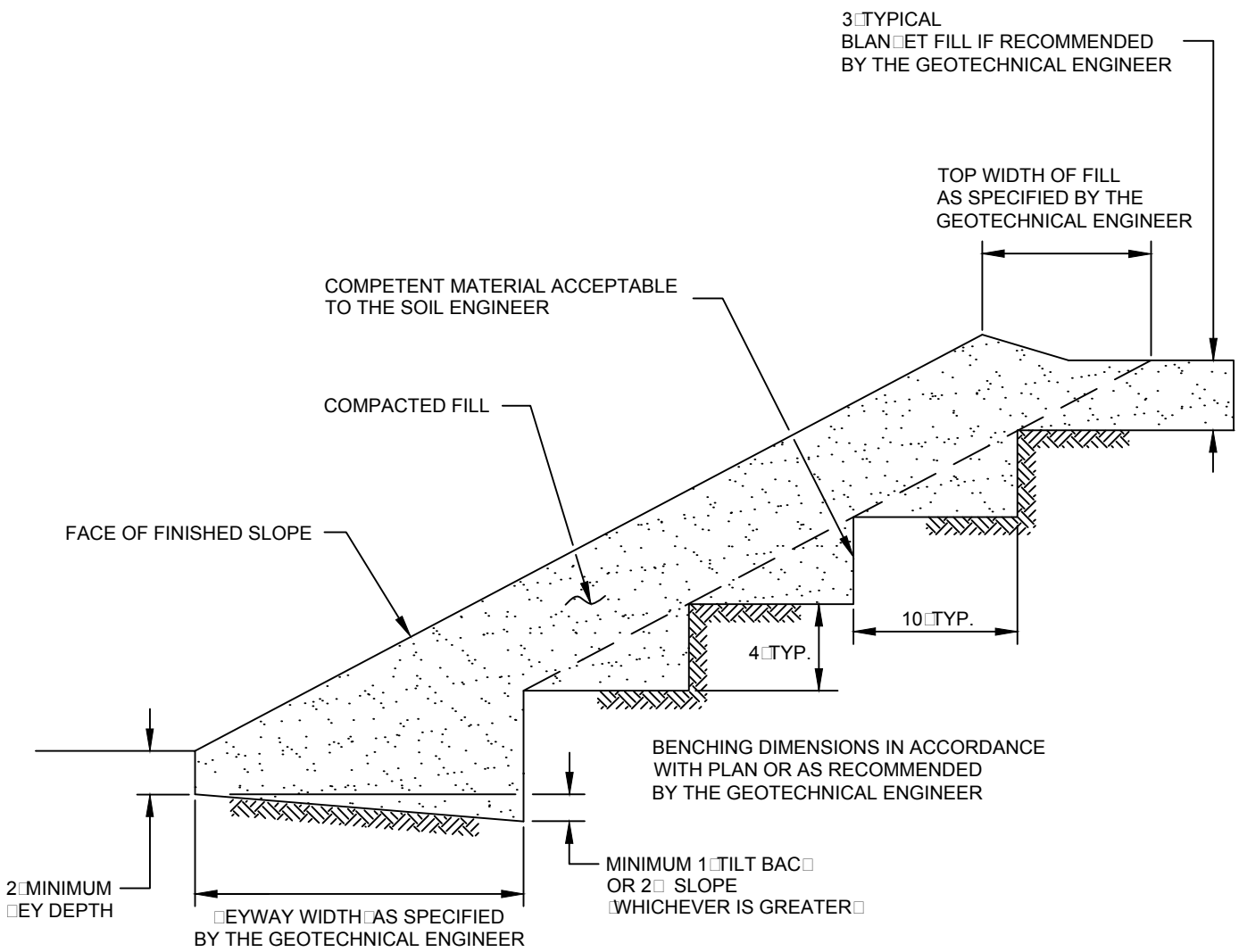
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN□JAS
CH□D□G□M

PLATE D-4

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



STABILIZATION FILL DETAIL

GRADING GUIDE SPECIFICATIONS

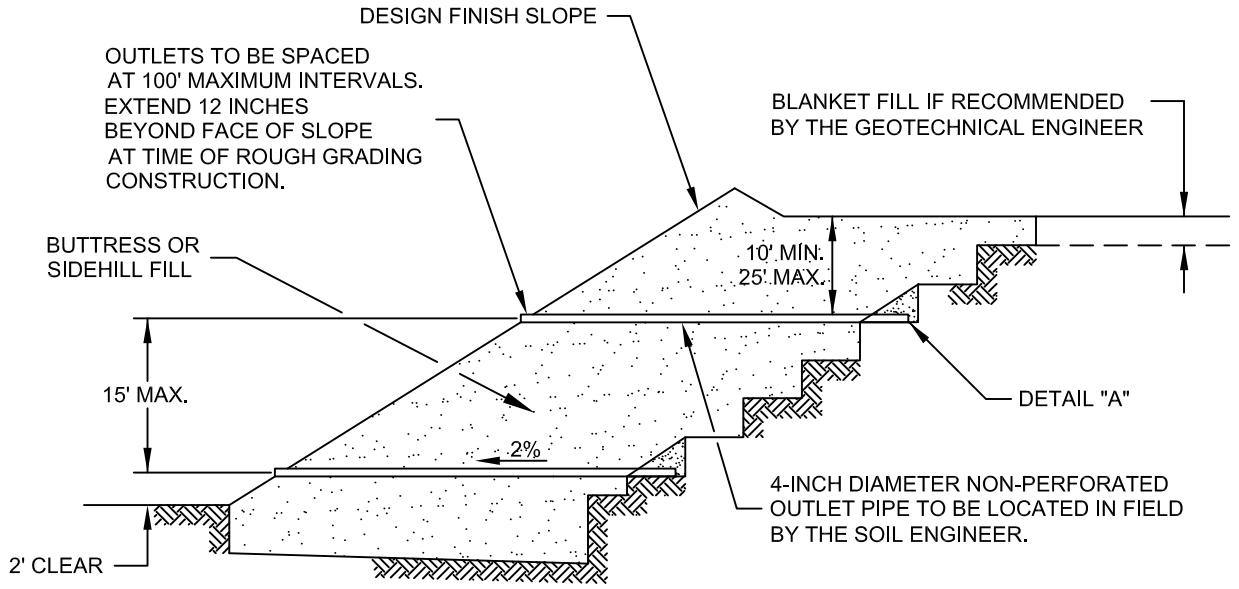
NOT TO SCALE

DRAWN JAS
CH D G M

PLATE D-5

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



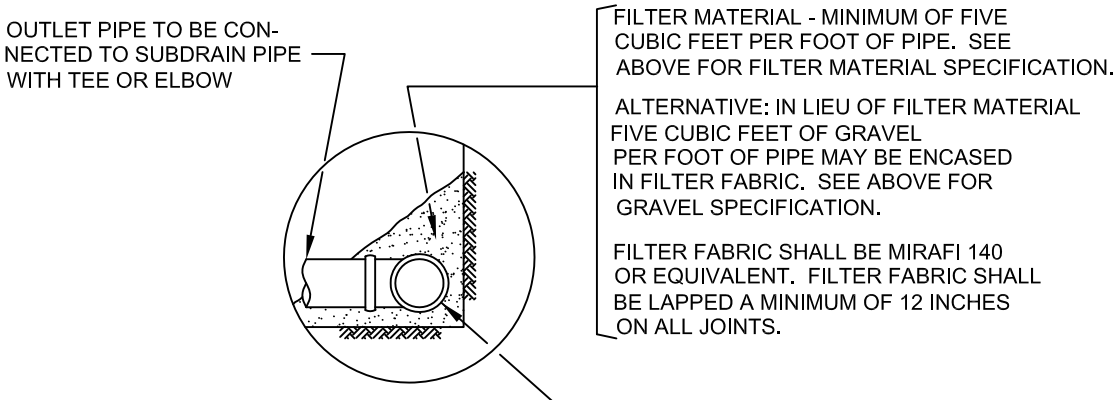
"FILTER MATERIAL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT: (CONFORMS TO EMA STD. PLAN 323)

SIEVE SIZE	PERCENTAGE PASSING
1"	100
3/4"	90-100
3/8"	40-100
NO. 4	25-40
NO. 8	18-33
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

"GRAVEL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT:

SIEVE SIZE	MAXIMUM PERCENTAGE PASSING
1 1/2"	100
NO. 4	50
NO. 200	8

SAND EQUIVALENT = MINIMUM OF 50



DETAIL "A"

NOTES:
1. TRENCH FOR OUTLET PIPES TO BE BACKFILLED WITH ON-SITE SOIL.

SLOPE FILL SUBDRAINS

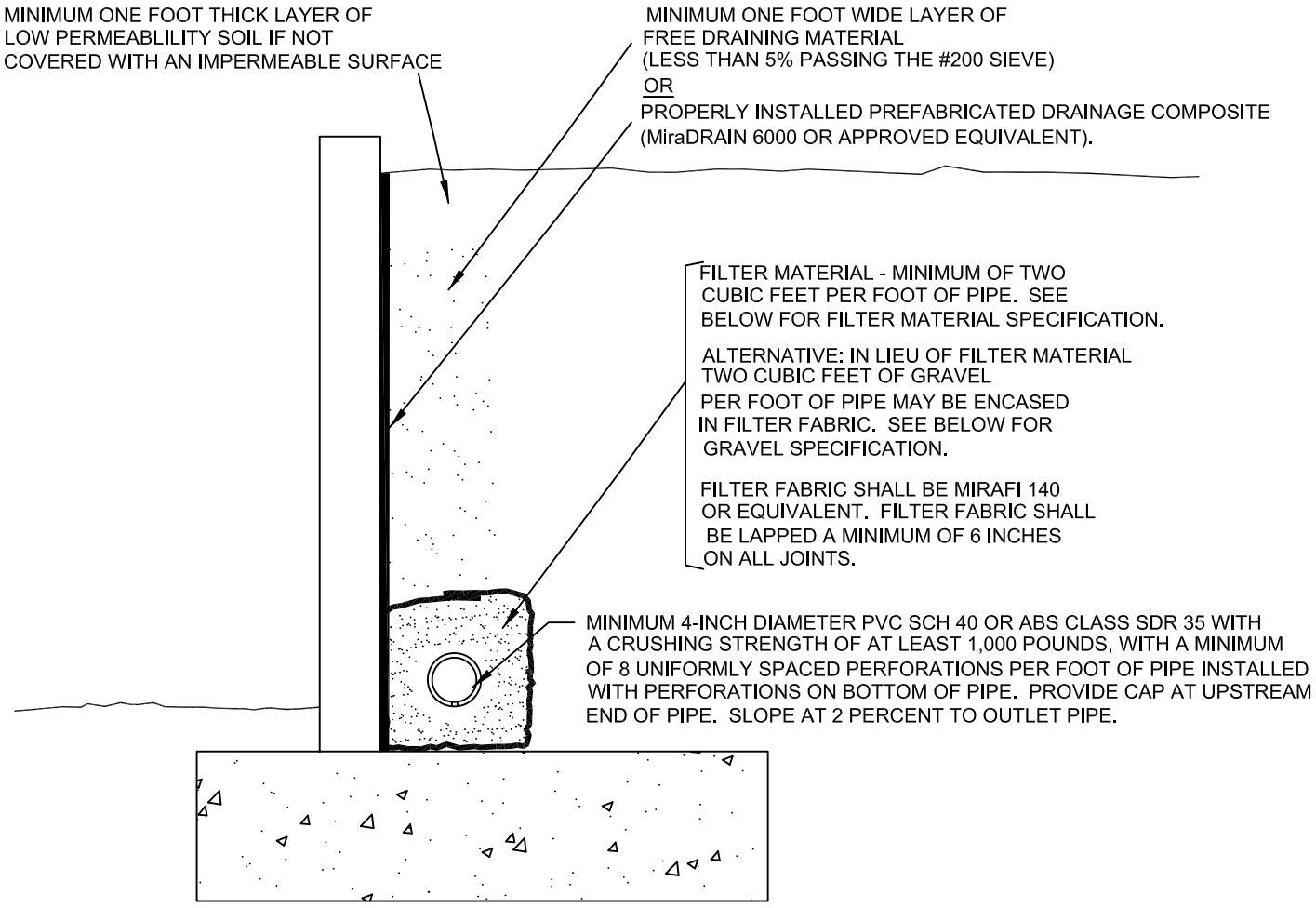
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-6

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



"FILTER MATERIAL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT: (CONFORMS TO EMA STD. PLAN 323)

SIEVE SIZE	PERCENTAGE PASSING
1"	100
3/4"	90-100
3/8"	40-100
NO. 4	25-40
NO. 8	18-33
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

"GRAVEL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT:

SIEVE SIZE	MAXIMUM PERCENTAGE PASSING
1 1/2"	100
NO. 4	50
NO. 200	8

SAND EQUIVALENT = MINIMUM OF 50

RETAINING WALL BACKDRAINS

GRADING GUIDE SPECIFICATIONS

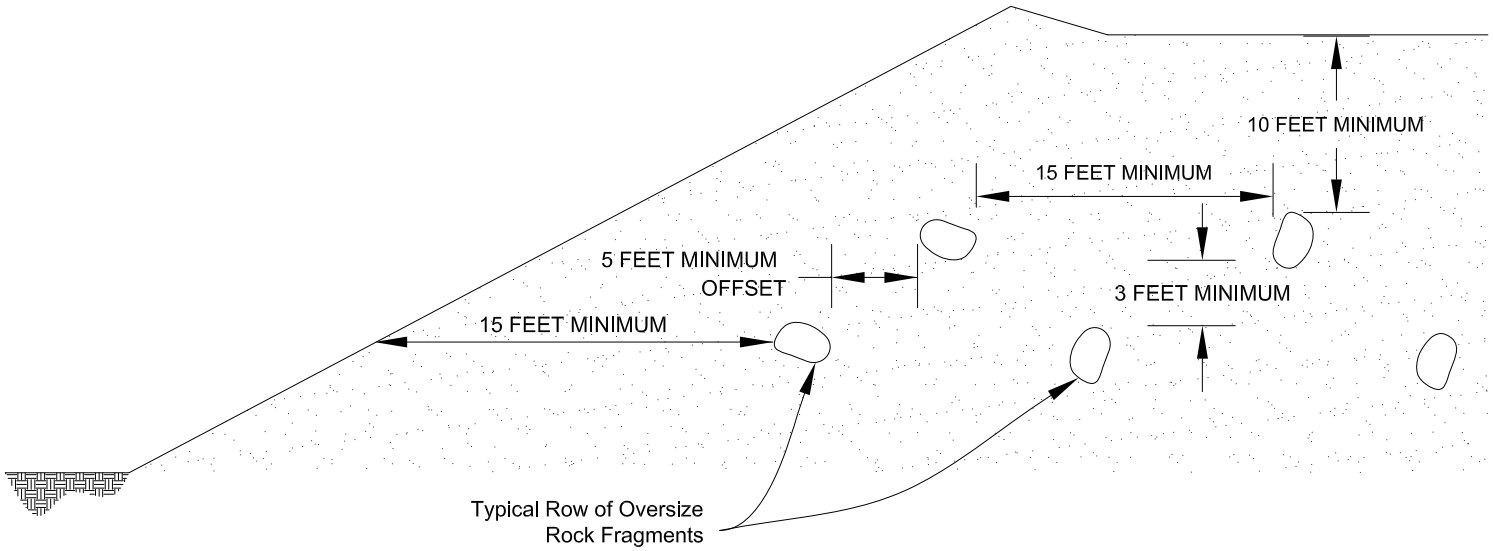
NOT TO SCALE

DRAWN: JAS
CHKD: GKM

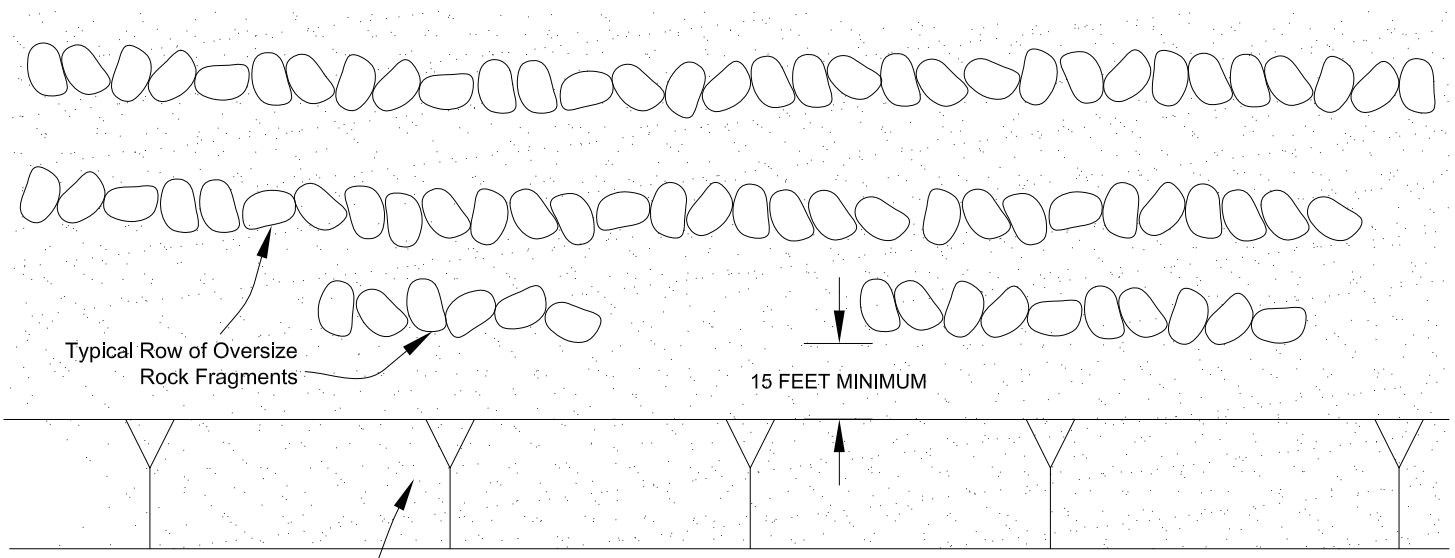
PLATE D-7

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



Section View



Plan View

PLACEMENT OF OVERSIZED MATERIAL

GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: PM
CHKD: GKM

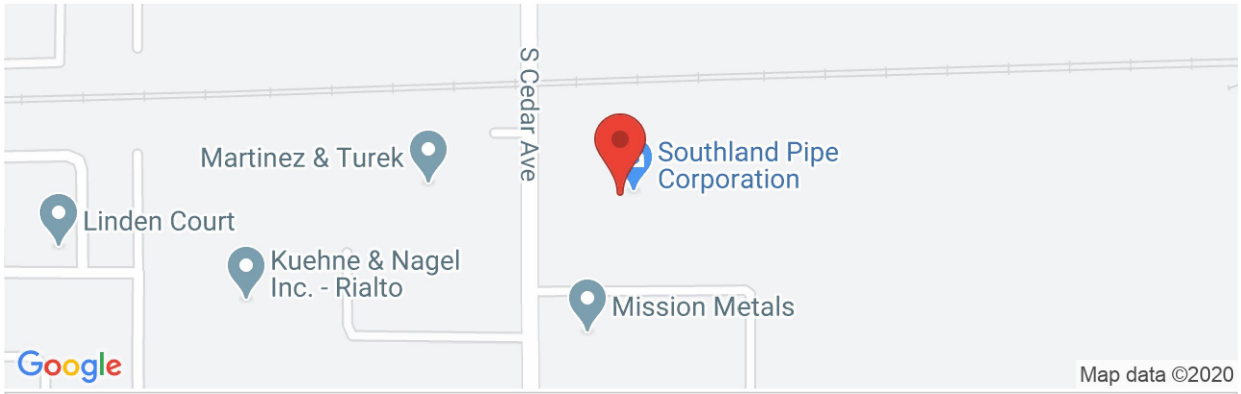
PLATE D-8

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL

APPENDIX E

Latitude, Longitude: 34.095123, -117.395514



Date	7/29/2020, 1:59:37 PM
Design Code Reference Document	ASCE7-16
Risk Category	III
Site Class	D - Stiff Soil

Type	Value	Description
S_S	1.786	MCE_R ground motion. (for 0.2 second period)
S_1	0.7	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.786	Site-modified spectral acceleration value
S_{M1}	null -See Section 11.4.8	Site-modified spectral acceleration value
S_{DS}	1.19	Numeric seismic design value at 0.2 second SA
S_{D1}	null -See Section 11.4.8	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	null -See Section 11.4.8	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	null -See Section 11.4.8	Site amplification factor at 1.0 second
PGA	0.755	MCE_G peak ground acceleration
F_{PGA}	1.1	Site amplification factor at PGA
PGA_M	0.831	Site modified peak ground acceleration
T_L	12	Long-period transition period in seconds
SsRT	2.18	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	2.383	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.786	Factored deterministic acceleration value. (0.2 second)
S1RT	0.851	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.955	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.7	Factored deterministic acceleration value. (1.0 second)
PGAd	0.755	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	0.915	Mapped value of the risk coefficient at short periods
C_{R1}	0.891	Mapped value of the risk coefficient at a period of 1 s

SOURCE: SEAOC/OSHPD Seismic Design Maps Tool
<https://seismicmaps.org/>

SEISMIC DESIGN PARAMETERS - 2019 CBC
PROPOSED COMMERCIAL/INDUSTRIAL BUILDING
RIALTO, CALIFORNIA

DRAWN: JLL
CHKD: RGT
SCG PROJECT 21G149-1
PLATE E-1

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL

March 31, 2021

BCIF Acquisitions LLC
4675 MacArthur Court, Suite 625
Newport Beach, California 92660

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Attention: Mr. Peter F. Schafer
AVP, Development

Project No.: **21G149-2**

Subject: **Updated Results of Infiltration Testing**
Proposed Commercial/Industrial Building
1230 West Durst Drive
Rialto California

Reference: Updated Geotechnical Investigation, Proposed Commercial/Industrial Building, 1230 West Durst Drive, Rialto, California, prepared by Southern California Geotechnical, Inc. (SCG) for BCIF Acquisitions LLC, SCG Project No. 21G149-1, dated March 31, 2021.

Dear Mr. Schafer:

In accordance with your request, we have conducted infiltration testing at the subject site. We are pleased to present this report summarizing the results of the infiltration testing and our design recommendations.

Scope of Services

The scope of services performed for this project was in general accordance with our Proposal No. 21P191 dated March 11, 2021. The scope of services included a visual site reconnaissance and the review of the previously prepared infiltration report to determine the infiltration rates of the on-site soils. The infiltration testing was performed in general accordance with the guidelines published in the Riverside County – Low Impact Development BMP Design Handbook – Section 2.3 of Appendix A, prepared for the Riverside County Department of Environmental Health (RCDEH), dated December, 2013. The San Bernardino County standards defer to the guidelines published by the RCDEH.

Site and Project Description

The subject site is located at the address of 1230 West Durst Drive in Rialto, California. The site is bounded to the north by a railroad easement, to the west by South Cedar Avenue, to the south by West Durst Drive, and to the east by an existing commercial/industrial building. The general location of the site is illustrated on the Site Location Map, included as Plate 1 of this report.

The site consists of three (3) rectangular to irregular-shaped parcels, which total 8.94± acres in size. Based on our site reconnaissance performed on March 17, 2021, the site is currently vacant and developed with remnants of the former Southland Pipe Corporation. The previously existing development consisted of a 10,555± ft² industrial building located in the central region of the

site, and two (2) concrete/base crushing facilities located in the east-central region and northeast corner of the site. The crushing facilities included, but were not limited to, canopies, above-ground storage tanks (AST's), concrete pillars, storage enclosures, and conveyor-belt pads. The 10,555± ft² industrial building is still present. This building is of steel frame construction with metal siding, and is assumed to be supported on conventional shallow foundations with a concrete slab-on-grade floor. An 8±-foot-high CMU wall borders the site. The site is also developed with an automobile asphaltic concrete (AC) parking lot in the southwestern region. The existing AC pavements are in poor condition with moderate to severe cracking throughout. Ground surface cover for the remainder of the site consists of exposed soils and aggregate base with isolated Portland cement concrete (PCC) areas. A concrete drain is also present along the southern half of the eastern property line.

Topographic information for the site was obtained from an ALTA plan provided by the client. The plan indicates that generally the overall site topography gently slopes downward to the southeast at a gradient of 2± percent. The elevation at the subject site generally ranges from 1235± feet mean sea level (msl) in the northwestern corner of the site to 1218± feet msl in the southeastern corner.

Proposed Development

The site plan provided to our office by the client indicates that the new development will consist of a single commercial/industrial building, 203,230± ft^2 in size. The building will be located in the western region of the property. Dock-high doors will be constructed along a portion of the east building wall. The building is expected to be surrounded by AC pavements in the parking and drive areas, PCC pavements in the loading dock area, and concrete flatwork and landscaped planters throughout the site.

We understand that the proposed development will include on-site stormwater infiltration. The infiltration system is expected to consist of a below-grade chamber system located in the eastern region of the site. The bottom of the proposed system is expected to be 8 to 10± feet below the existing site grades.

Previous Study

SCG previously performed a geotechnical investigation at the subject site, which is referenced above. As part of this investigation, six (6) borings (identified as Boring Nos. B-1 through B-6) were advanced to depths of 20 to 25± feet below existing site grades. Boring No. B-4 was drilled through the existing AC pavement. The pavement section at this location consists of 1± inch of AC underlain by 6± inches of crushed aggregate base. Artificial fill soils were encountered beneath the existing pavement at Boring No. B-4 and at the ground surface at Boring Nos. B-3, B-5 and B-6, extending to depths of 2½ to 5½± feet below the existing site grades. The fill soils generally consist of medium dense silty sands with varying fine gravel content. Native alluvium was encountered beneath the artificial fill soils and at the ground surface at all of the boring locations, extending to at least the maximum depth explored of 25± feet. The near-surface alluvium generally consists of medium dense to dense gravelly sands, silty sands, and sands with varying fine to coarse gravel content, extending to depths of 5½ to 12± feet. At greater depths and extending to the maximum depth explored of 25± feet, the alluvial soils generally consist of dense to very dense sands, gravelly sands and occasional very dense silty sands. Boring No. B-2

encountered a soil stratum consisting of dense to very dense gravelly sands, extending from the ground surface to a depth of 20± feet. Free water was not encountered during the drilling of any of the borings.

Groundwater

Free water was not encountered during the drilling of any of the borings. Based on the lack of any water within the borings, and the moisture contents of the recovered soil samples, the static groundwater is considered to have existed at a depth in excess of 25± feet at the time of the subsurface exploration. As a part of our research, we reviewed available groundwater data in order to determine groundwater levels for the site. Water level data was obtained from the California Department of Water Resources Water Data Library website, https://wdl.water.ca.gov/waterdatalibrary/. The nearest monitoring well on record (identified as State Well Number: 01S05W11F003S) is located 1± mile northeast of the project site. Water level readings within this monitoring well indicate a high groundwater level of 223± feet below the ground surface in May 1999.

Subsurface Exploration

Scope of Exploration

The subsurface exploration conducted for the infiltration testing consisted of two (2) infiltration test borings (identified as I-1 and I-2), advanced to a depth of 10± feet below the existing site grades. The borings for this project were drilled on July 13, 2020.

The infiltration borings were advanced using a truck-mounted drilling rig, equipped with 8-inch diameter hollow stem augers and were logged during drilling by a member of our staff. Upon the completion of the infiltration borings, the bottom of each test boring was covered with 2± inches of clean ¾-inch gravel. A sufficient length of 3-inch-diameter perforated PVC casing was then placed into each test hole so that the PVC casing extended from the bottom of the test hole to the ground surface. Clean ¾-inch gravel was then installed in the annulus surrounding the PVC casing.

The approximate locations of the infiltration borings are indicated on the Infiltration Test Location Plan, enclosed as Plate 2 of this report.

Geotechnical Conditions

Native alluvial soils were encountered at the ground surface at both of the infiltration boring locations, extending to at least the maximum depth explored of 10± feet below the existing site grades. The alluvium generally consists of medium dense to very dense gravelly fine to coarse sands with varying silt content. Groundwater was not encountered during the drilling of these borings. The Boring Logs, which illustrate the conditions encountered at the boring locations, are included with this report.

Infiltration Testing

As previously mentioned, the infiltration testing was performed in general accordance with the guidelines published in Riverside County – Low Impact Development BMP Design Handbook – Section 2.3 of Appendix A, which apply to San Bernardino County.

Pre-soaking

In accordance with the county infiltration standards for sandy soils, all infiltration test borings were pre-soaked 2 hours prior to the infiltration testing or until all of the water had percolated through the test holes. The pre-soaking process consisted of filling test borings by inverting a full 5-gallon bottle of clear water supported over each hole so that the water flow into the hole holds constant at a level at least 5 times the hole's radius above the gravel at the bottom of each hole. Pre-soaking was completed after all of the water had percolated through the test holes.

Infiltration Testing

Following the pre-soaking process of the infiltration test borings, SCG performed the infiltration testing. Each test hole was filled with water to a depth of at least 5 times the hole's radius above the gravel at the bottom of the test holes. In accordance with the San Bernardino County guidelines, since "sandy soils" were encountered at the bottom of both of the infiltration test borings (where 6 inches of water infiltrated into the surrounding soils for two consecutive 25-minute readings), readings were taken at 10-minute intervals for a total of 1 hour at each test location. After each reading, water was added to the borings so that the depth of the water was at least 5 times the radius of the hole. The water level readings are presented on the spreadsheets enclosed with this report. The infiltration rates for each of the timed intervals are also tabulated on the spreadsheets.

The infiltration rates from the test are tabulated in inches per hour. In accordance with the typically accepted practice, it is recommended that the most conservative reading from the latter part of the infiltration tests be used as the design infiltration rate. The rates are summarized below:

Infiltration Test No.	Depth (feet)	Soil Description	Infiltration Rate (inches/hour)
I-1	10	Light Gray Brown Silty fine to coarse Sand, some fine to coarse Gravel	3.4
I-2	10	Light Gray Brown Silty fine to coarse Sand, some fine Gravel, trace coarse Gravel	4.5

Laboratory Testing

Moisture Content

The moisture contents for the recovered soil samples within the borings were determined in accordance with ASTM D-2216 and are expressed as a percentage of the dry weight. These test results are presented on the Boring Logs.

Grain Size Analysis

The grain size distribution of selected soils collected from the base of each infiltration test boring have been determined using a range of wire mesh screens. These tests were performed in general accordance with ASTM D-422 and/or ASTM D-1140. The weight of the portion of the sample retained on each screen is recorded and the percentage finer or coarser of the total weight is calculated. The results of these tests are presented on Plates C-1 through C-2 of this report.

Design Recommendations

Two (2) infiltration tests were performed at the subject site. As noted above, the infiltration rates at these locations vary from 3.4 to 4.5 inches per hour. **Based on the infiltration test results from Infiltration Test Nos. I-1 through I-2, we recommend a design infiltration rate of 3.4 inches per hour be used for the proposed below-grade chamber system located in the eastern area of the site, if the system extends to a depth of 10 feet below the existing grades.**

The design of the storm water infiltration system should be performed by the project civil engineer, in accordance with the City of Rialto and/or County of San Bernardino guidelines. It is recommended that the system be constructed so as to facilitate removal of silt and clay, or other deleterious materials from any water that may enter the system. The presence of such materials would decrease the effective infiltration rate. **It is recommended that the project civil engineer apply an appropriate factor of safety. The infiltration rate recommended above is based on the assumption that only clean water will be introduced to the subsurface profile. Any fines, debris, or organic materials could significantly impact the infiltration rate.** It should be noted that the recommended infiltration rates are based on infiltration testing at two (2) discrete locations and that the overall infiltration rate of the proposed infiltration system could vary considerably.

Infiltration Rate Considerations

The infiltration rates presented herein was determined in accordance with the San Bernardino County guidelines and are considered valid only for the time and place of the actual test. Varying subsurface conditions will exist in other areas of the site, which could alter the recommended infiltration rate presented above. The infiltration rate will decline over time between maintenance cycles as silt or clay particles accumulate on the BMP surface. The infiltration rate is highly dependent upon a number of factors, including density, silt and clay content, grainsize distribution throughout the range of particle sizes, and particle shape. Small changes in these factors can cause large changes in the infiltration rate.

Infiltration rates are based on unsaturated flow. As water is introduced into soils by infiltration, the soils become saturated and the wetting front advances from the unsaturated zone to the saturated zone. Once the soils become saturated, infiltration rates become zero, and water can only move through soils by hydraulic conductivity at a rate determined by pressure head and soil permeability. Changes in soil moisture content will affect the infiltration rate. Infiltration rates should be expected to decrease until the soils become saturated. Soil permeability values will then govern groundwater movement. Permeability values may be on the order of 10 to 20 times less than infiltration rates. The system designer should incorporate adequate factors of safety

and allow for overflow design into appropriate traditional storm drain systems, which would transport storm water off-site.

Construction Considerations

The infiltration rate presented in this report is specific to the tested location and tested depth. Infiltration rates can be significantly reduced if the soils are exposed to excessive disturbance or compaction during construction. Therefore, the subgrade soils within the proposed infiltration system area should not be overexcavated, undercut or compacted in any significant manner. **It is recommended that a note to this effect be added to the project plans and/or specifications.**

We recommend that a representative from the geotechnical engineer be on-site during the construction of the proposed infiltration system to identify the soil classification at the base of the system. It should be confirmed that the soils at the base of the proposed infiltration system correspond with those presented in this report to ensure that the performance of the system will be consistent with the rate reported herein.

We recommend that scrapers and other rubber-tired heavy equipment not be operated on the system bottom, or at levels lower than 2 feet above the bottom of the system, particularly within basins. As such, the bottom 24 inches of the infiltration system should be excavated with non-rubber-tired equipment, such as excavators.

Location of Infiltration System

The use of on-site storm water infiltration system carries a risk of creating adverse geotechnical conditions. Increasing the moisture content of the soil can cause the soil to lose internal shear strength and increase its compressibility, resulting in a change in the designed engineering properties. Overlying structures and pavements in the infiltration area could potentially be damaged due to saturation of subgrade soils. **The proposed infiltration system for this site should be located at least 25 feet away from any structures, including retaining walls, and at least 50 feet away from slopes.** Even with this provision of locating the infiltration system at least 25 feet from the building or 50 feet from slopes, it is possible that infiltrating water into the subsurface soils could have an adverse effect on the proposed or existing structures and slopes. It should also be noted that utility trenches which happen to collect storm water can also serve as conduits to transmit storm water toward the structure, depending on the slope of the utility trench. Therefore, consideration should also be given to the proposed locations of underground utilities which may pass near the proposed infiltration system.

The infiltration system designer should also give special consideration to the effect that the proposed infiltration system may have on nearby subterranean structures, open excavations, or descending slopes. In particular, infiltration systems should not be located near the crest of descending slopes, particularly where the slopes are comprised of granular soils. Such systems will require specialized design and analysis to evaluate the potential for slope instability, piping failures and other phenomena that typically apply to earthen dam design. This type of analysis is beyond the scope of this infiltration test report, but these factors should be considered by the infiltration system designer when locating the infiltration system.

General Comments

This report has been prepared as an instrument of service for use by the client in order to aid in the evaluation of this property and to assist the architects and engineers in the design and preparation of the project plans and specifications. This report may be provided to the contractor(s) and other design consultants to disclose information relative to the project. However, this report is not intended to be utilized as a specification in and of itself, without appropriate interpretation by the project architect, structural engineer, and/or civil engineer. The design of the proposed storm water infiltration system is the responsibility of the civil engineer. The role of the geotechnical engineer is limited to determination of infiltration rate only. By using the design infiltration rate contained herein, the civil engineer agrees to indemnify, defend, and hold harmless the geotechnical engineer for all aspects of the design and performance of the proposed storm water infiltration system. The reproduction and distribution of this report must be authorized by the client and Southern California Geotechnical, Inc. Furthermore, any reliance on this report by an unauthorized third party is at such party's sole risk, and we accept no responsibility for damage or loss which may occur.

The analysis of this site was based on a subsurface profile interpolated from limited discrete soil samples. While the materials encountered in the project area are considered to be representative of the total area, some variations should be expected between boring locations and testing depths. If the conditions encountered during construction vary significantly from those detailed herein, we should be contacted immediately to determine if the conditions alter the recommendations contained herein.

This report has been based on assumed or provided characteristics of the proposed development. It is recommended that the owner, client, architect, structural engineer, and civil engineer carefully review these assumptions to ensure that they are consistent with the characteristics of the proposed development. If discrepancies exist, they should be brought to our attention to verify that they do not affect the conclusions and recommendations contained herein. We also recommend that the project plans and specifications be submitted to our office for review to verify that our recommendations have been correctly interpreted. The analysis, conclusions, and recommendations contained within this report have been promulgated in accordance with generally accepted professional geotechnical engineering practice. No other warranty is implied or expressed.

Closure

We sincerely appreciate the opportunity to be of service on this project. We look forward to providing additional consulting services during the course of the project. If we may be of further assistance in any manner, please contact our office.

Respectfully Submitted,

SOUTHERN CALIFORNIA GEOTECHNICAL, INC.

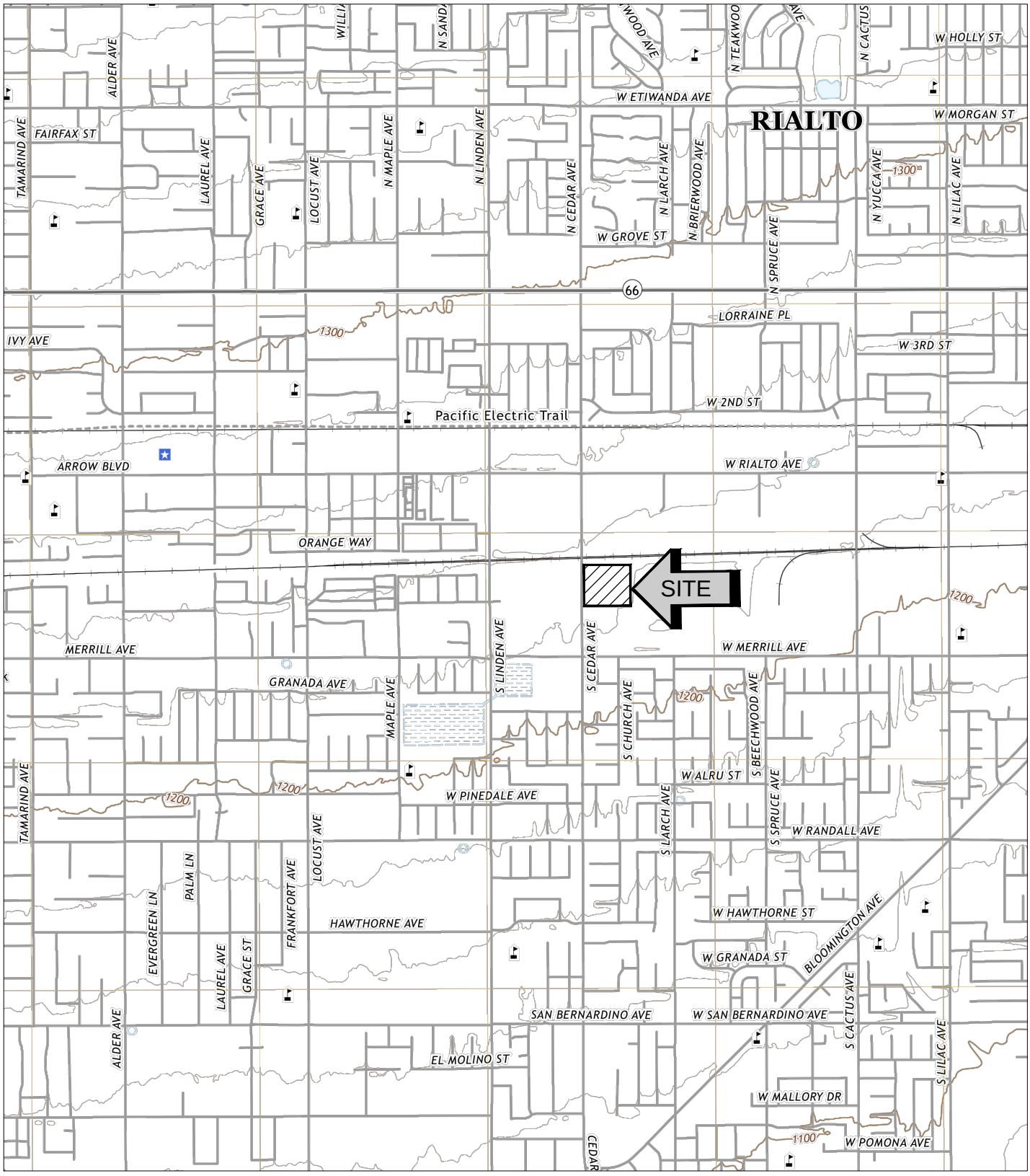
Jose Zuniga
Staff Engineer



Robert G. Trazo, GE 2655
Principal Engineer

Distribution: (1) Addressee

Enclosures: Plate 1 - Site Location Map
Plate 2 - Infiltration Test Location Plan
Boring Log Legend and Logs (4 pages)
Infiltration Test Results Spreadsheets (2 pages)
Grain Size Distribution Graphs (2 pages)



SOURCE: USGS TOPOGRAPHIC MAP OF THE FONTANA QUADRANGLE, SAN BERNARDINO COUNTY, CALIFORNIA, 2018.

SITE LOCATION MAP

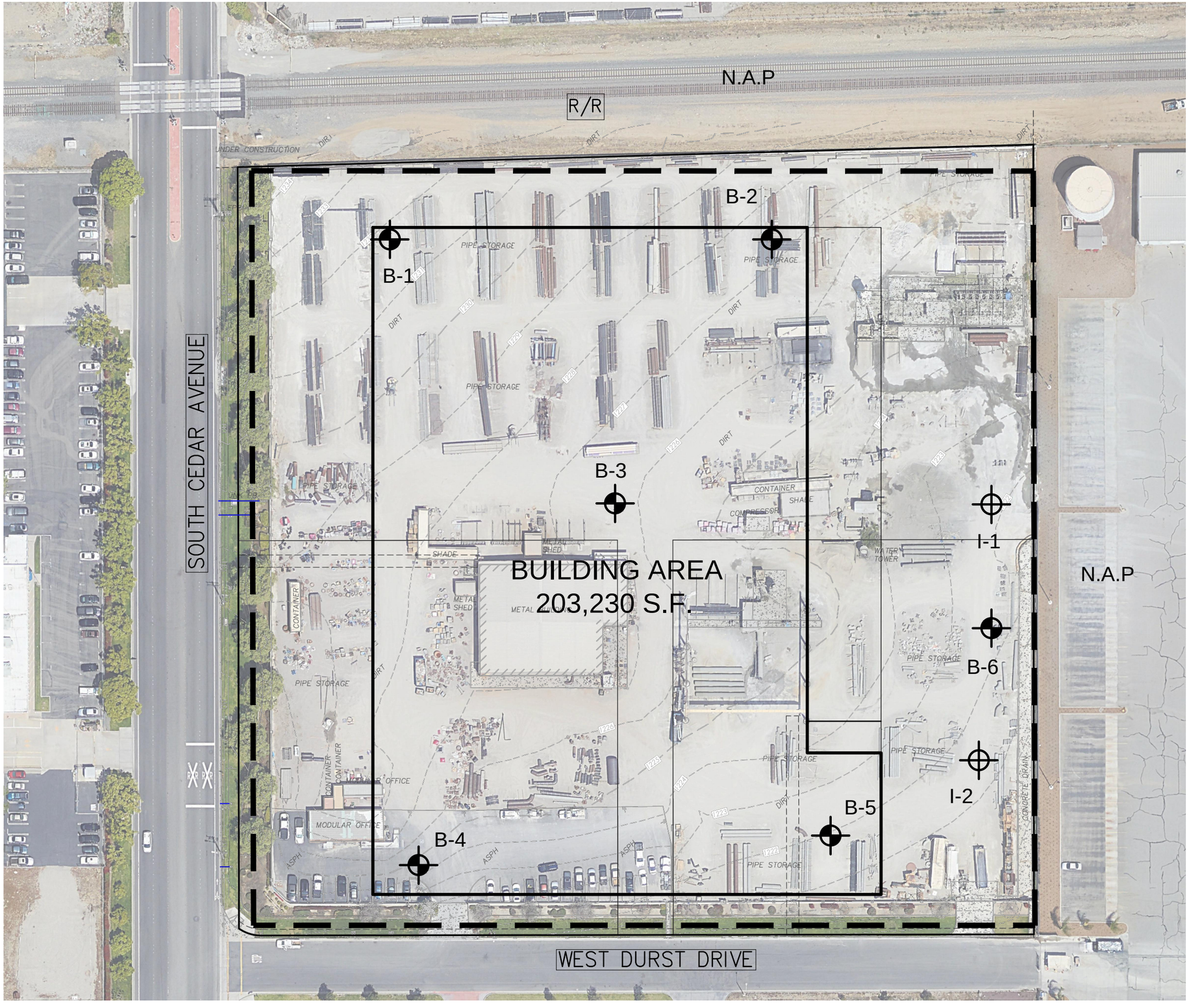
PROPOSED COMMERCIAL/INDUSTRIAL BUILDING

RIALTO, CALIFORNIA

SCALE: 1" = 2000'	
DRAWN: JLL CHKD: RGT	
SCG PROJECT 21G149-2	
PLATE 1	

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



NORTH
SoCalGeo

GEOTECHNICAL LEGEND

- APPROXIMATE BORING LOCATION (SCG PROJECT NO. 20G174-1)
- APPROXIMATE INFILTRATION TEST LOCATION (SCG PROJECT NO. 20G174-2)

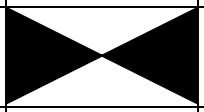
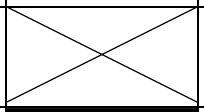
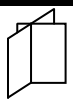
NOTE: BASE MAP PREPARED BY HPA, INC.
AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH.
TOPOGRAPHIC INFORMATION PROVIDED BY THE CLIENT.

INFILTRATION TEST LOCATION PLAN

PROPOSED COMMERCIAL/INDUSTRIAL BUILDING
RIALTO, CALIFORNIA

SCALE: 1" = 80'	SOUTHERN CALIFORNIA GEOTECHNICAL
DRAWN: JLL CHKD: RGT	
SCG PROJECT 21G149-2	
PLATE 2	

BORING LOG LEGEND

SAMPLE TYPE	GRAPHICAL SYMBOL	SAMPLE DESCRIPTION
AUGER		SAMPLE COLLECTED FROM AUGER CUTTINGS, NO FIELD MEASUREMENT OF SOIL STRENGTH. (DISTURBED)
CORE		ROCK CORE SAMPLE: TYPICALLY TAKEN WITH A DIAMOND-TIPPED CORE BARREL. TYPICALLY USED ONLY IN HIGHLY CONSOLIDATED BEDROCK.
GRAB		SOIL SAMPLE TAKEN WITH NO SPECIALIZED EQUIPMENT, SUCH AS FROM A STOCKPILE OR THE GROUND SURFACE. (DISTURBED)
CS		CALIFORNIA SAMPLER: 2-1/2 INCH I.D. SPLIT BARREL SAMPLER, LINED WITH 1-INCH HIGH BRASS RINGS. DRIVEN WITH SPT HAMMER. (RELATIVELY UNDISTURBED)
NSR		NO RECOVERY: THE SAMPLING ATTEMPT DID NOT RESULT IN RECOVERY OF ANY SIGNIFICANT SOIL OR ROCK MATERIAL.
SPT		STANDARD PENETRATION TEST: SAMPLER IS A 1.4 INCH INSIDE DIAMETER SPLIT BARREL, DRIVEN 18 INCHES WITH THE SPT HAMMER. (DISTURBED)
SH		SHELBY TUBE: TAKEN WITH A THIN WALL SAMPLE TUBE, PUSHED INTO THE SOIL AND THEN EXTRACTED. (UNDISTURBED)
VANE		VANE SHEAR TEST: SOIL STRENGTH OBTAINED USING A 4 BLADED SHEAR DEVICE. TYPICALLY USED IN SOFT CLAYS-NO SAMPLE RECOVERED.

COLUMN DESCRIPTIONS

DEPTH: Distance in feet below the ground surface.

SAMPLE: Sample Type as depicted above.

BLOW COUNT: Number of blows required to advance the sampler 12 inches using a 140 lb hammer with a 30-inch drop. 50/3" indicates penetration refusal (>50 blows) at 3 inches. WH indicates that the weight of the hammer was sufficient to push the sampler 6 inches or more.

POCKET PEN.: Approximate shear strength of a cohesive soil sample as measured by pocket penetrometer.

GRAPHIC LOG: Graphic Soil Symbol as depicted on the following page.

DRY DENSITY: Dry density of an undisturbed or relatively undisturbed sample in lbs/ft^3.

MOISTURE CONTENT: Moisture content of a soil sample, expressed as a percentage of the dry weight.

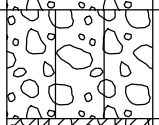
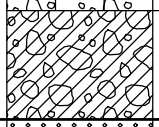
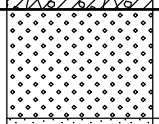
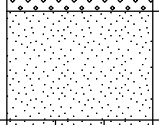
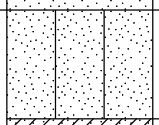
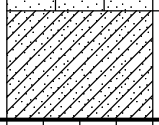
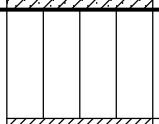
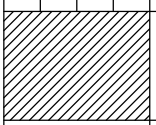
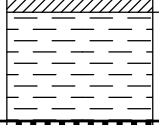
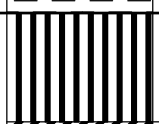
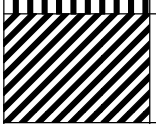
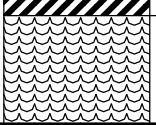
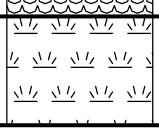
LIQUID LIMIT: The moisture content above which a soil behaves as a liquid.

PLASTIC LIMIT: The moisture content above which a soil behaves as a plastic.

PASSING #200 SIEVE: The percentage of the sample finer than the #200 standard sieve.

UNCONFINED SHEAR: The shear strength of a cohesive soil sample, as measured in the unconfined state.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. I-1

JOB NO.: 20G174-2
PROJECT: Proposed C/I Building
LOCATION: Rialto, California

DRILLING DATE: 7/13/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jose Zuniga

WATER DEPTH: Dry
CAVE DEPTH: ---
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		28			FILL: Brown Silty fine to coarse Sand, little fine Gravel, medium dense-damp		3					
		29			ALLUVIUM: Light Gray Brown Silty fine to coarse Sand, some fine to coarse Gravel, medium dense-dry to damp		2					
5		55			@ 6 to 10 feet, very dense		2					
		51					2					
10					Boring Terminated at 10 feet							

TBL 20G174-2.GPJ SOCALGEO.GDT 3/31/21

TEST BORING LOG

PLATE B-1

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. I-2

JOB NO.: 20G174-2
PROJECT: Proposed C/I Building
LOCATION: Rialto, California

DRILLING DATE: 7/13/20
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jose Zuniga

WATER DEPTH: Dry
CAVE DEPTH: ---
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		19			FILL: Brown Silty fine to coarse Sand, trace fine Gravel, medium dense-damp		4					
		47			ALLUVIUM: Light Gray Brown Silty fine to coarse Sand, some fine Gravel, trace coarse Gravel, dense-dry to damp		2					
5		39					2					
		40					3					
10					Boring Terminated at 10 feet							

TBL 20G174-2.GPJ SOCALGEO.GDT 3/31/21

TEST BORING LOG **PLATE B-2**

INFILTRATION CALCULATIONS

Project Name	Proposed C/I Building
Project Location	Rialto, CA
Project Number	20G174-2
Engineer	Jose Zuniga

Test Hole Radius	8	(in)
Test Depth	9	(ft)

Infiltration Test Hole	I-1

Interval Number		Time	Time Interval (min)	Water Depth (ft)	Change in Water Level (ft)	Average Head Height (ft)	Infiltration Rate Q (in/hr)	
P1	Initial	8:55 AM	25.0	4.40	1.90	3.65	4.58	Pre-Sat
	Final	9:20 AM		6.30				
P2	Initial	9:23 AM	25.0	4.20	1.90	3.85	4.36	
	Final	9:48 AM		6.10				
1	Initial	10:00 AM	10.0	6.00	0.45	2.78	3.47	Infiltration Testing
	Final	10:10 AM		6.45				
2	Initial	10:16 AM	10.0	6.00	0.43	2.79	3.31	
	Final	10:26 AM		6.43				
3	Initial	10:30 AM	10.0	6.00	0.48	2.76	3.72	
	Final	10:40 AM		6.48				
4	Initial	10:42 AM	10.0	6.00	0.44	2.78	3.39	
	Final	10:52 AM		6.44				
5	Initial	10:56 AM	10.0	6.00	0.44	2.78	3.39	
	Final	11:06 AM		6.44				
6	Initial	11:09 AM	10.0	6.00	0.44	2.78	3.39	
	Final	11:19 AM		6.44				

Per County Standards, Infiltration Rate calculated as follows:

$$Q = \frac{\Delta H(60r)}{\Delta t(r + 2H_{avg})}$$

Where:
- Q = Infiltration Rate (in inches per hour)
- ΔH = Change in Height (Water Level) over the time interval
- r = Test Hole (Borehole) Radius
- Δt = Time Interval
- H_{avg} = Average Head Height over the time interval

INFILTRATION CALCULATIONS

Project Name	Proposed C/I Building
Project Location	Rialto, CA
Project Number	20G174-2
Engineer	Jose Zuniga

Test Hole Radius	8	(in)
Test Depth	8	(ft)

Infiltration Test Hole	I-2

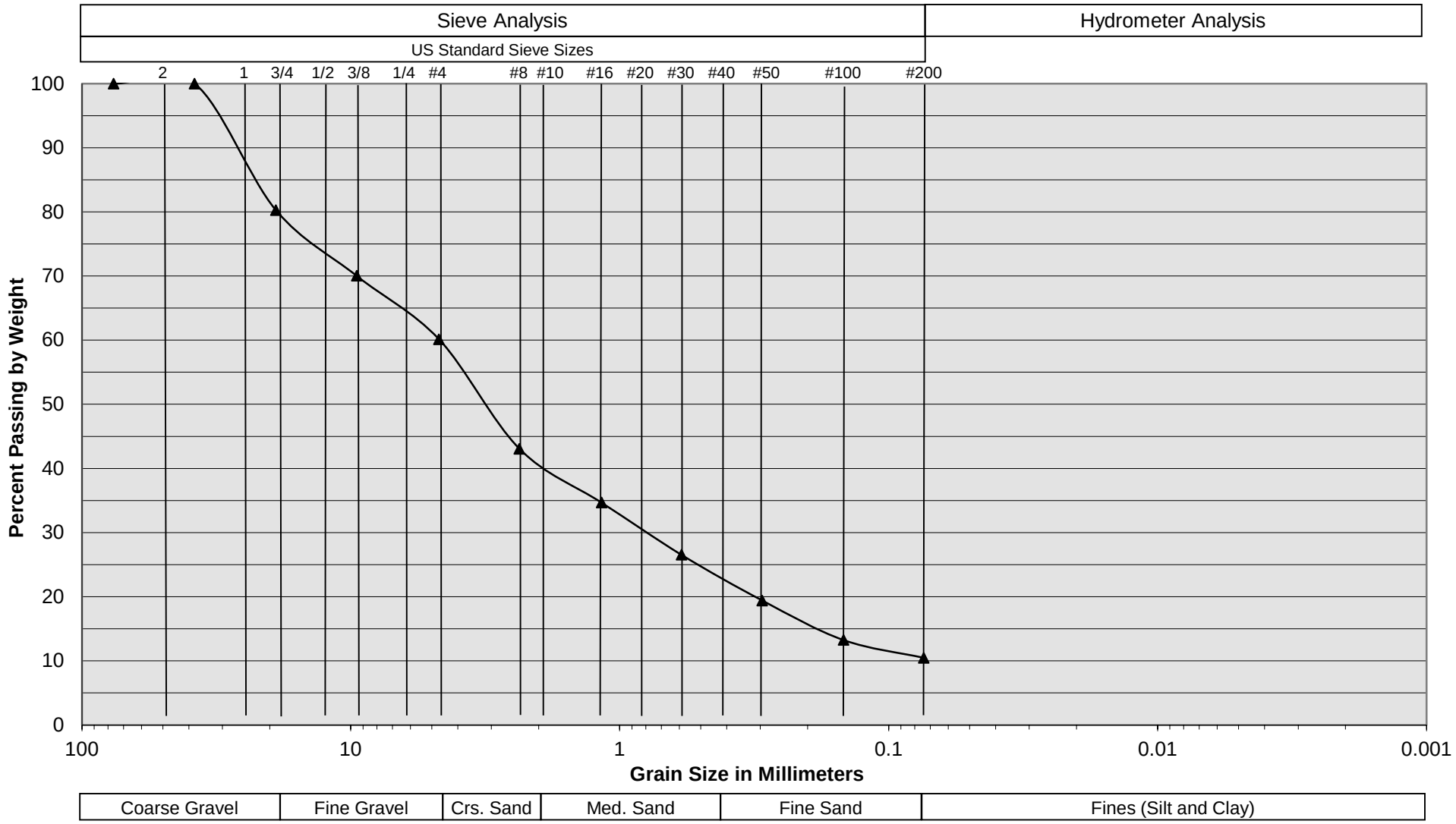
Interval Number		Time	Time Interval (min)	Water Depth (ft)	Change in Water Level (ft)	Average Head Height (ft)	Infiltration Rate Q (in/hr)	
P1	Initial	8:45 AM	25.0	5.50	1.41	1.80	6.36	Pre-Sat
	Final	9:10 AM		6.91				
P2	Initial	9:13 AM	25.0	5.50	1.40	1.80	6.30	
	Final	9:38 AM		6.90				
1	Initial	9:40 AM	10.0	5.50	0.56	2.22	5.26	Infiltration Testing
	Final	9:50 AM		6.06				
2	Initial	9:53 AM	10.0	5.50	0.55	2.23	5.16	
	Final	10:03 AM		6.05				
3	Initial	10:07 AM	10.0	5.50	0.55	2.23	5.16	
	Final	10:17 AM		6.05				
4	Initial	10:24 AM	10.0	5.50	0.50	2.25	4.65	
	Final	10:34 AM		6.00				
5	Initial	10:35 AM	10.0	5.50	0.49	2.26	4.54	
	Final	10:45 AM		5.99				
6	Initial	10:47 AM	10.0	5.50	0.49	2.26	4.54	
	Final	10:57 AM		5.99				

Per County Standards, Infiltration Rate calculated as follows:

$$Q = \frac{\Delta H(60r)}{\Delta t(r + 2H_{avg})}$$

Where: Q = Infiltration Rate (in inches per hour)
ΔH = Change in Height (Water Level) over the time interval
r = Test Hole (Borehole) Radius
Δt = Time Interval
H_{avg} = Average Head Height over the time interval

Grain Size Distribution

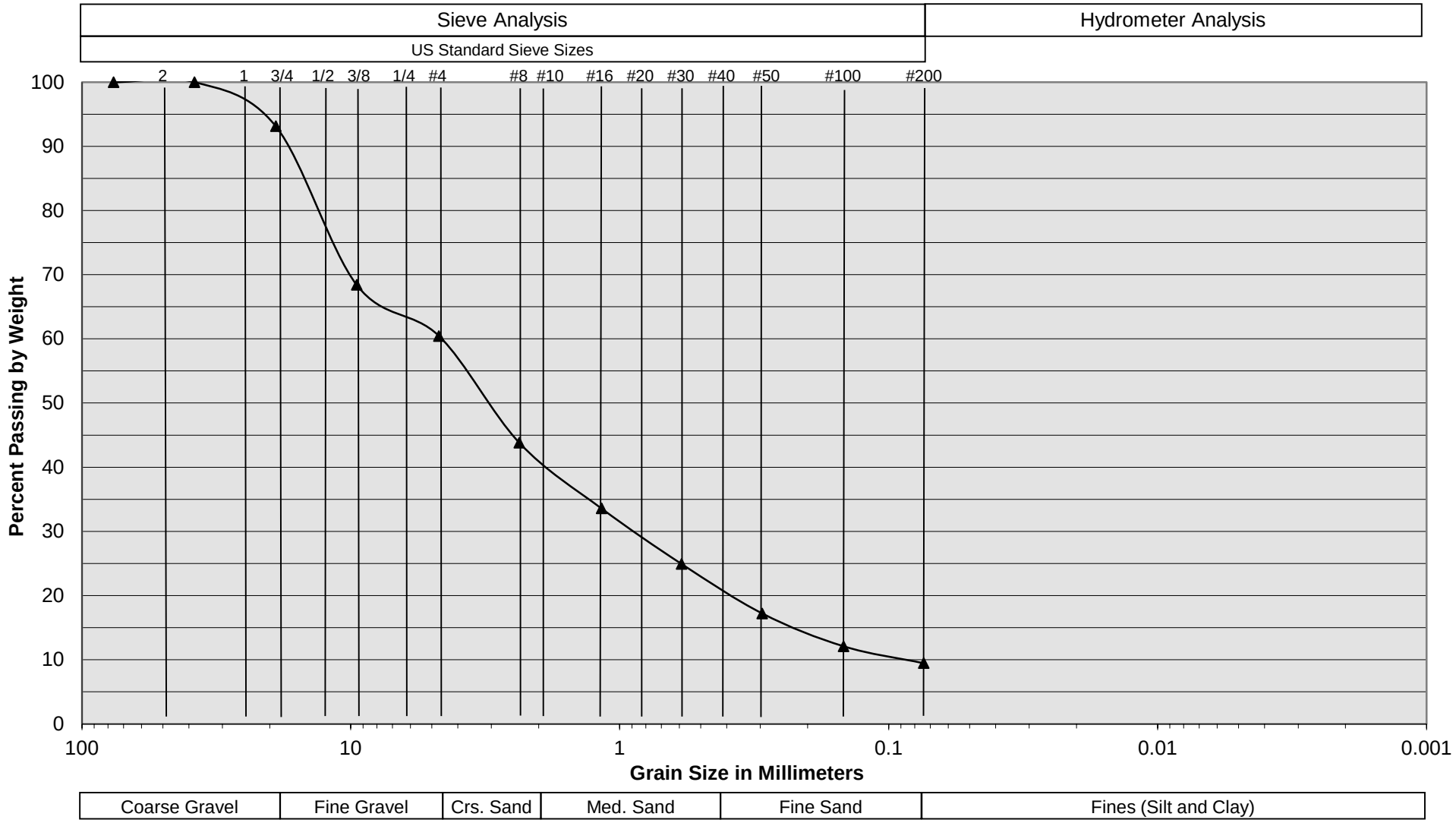


Sample Description	I-1 @ 8.5 feet
Soil Classification	Light Gray Brown Silty fine to coarse Sand, some fine to coarse Gravel

Commercial/Industrial Building
Rialto, CA
Project No. 20G174-2
PLATE C-1

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Grain Size Distribution



Sample Description	I-2 @ 8.5 feet
Soil Classification	Light Gray Brown Silty fine to coarse Sand, some fine Gravel, trace coarse Gravel

Commercial/Indutrial Building
Rialto, CA
Project No. 20G174-2
PLATE C-2

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

NOAA Atlas 14, Volume 6, Version 2
Location name: Rialto, California, USA*
Latitude: 34.0942°, Longitude: -117.3952°
Elevation: 1224.81 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.119 (0.099-0.145)	0.155 (0.129-0.188)	0.203 (0.168-0.247)	0.243 (0.200-0.298)	0.298 (0.237-0.379)	0.342 (0.266-0.444)	0.387 (0.293-0.515)	0.435 (0.320-0.596)	0.501 (0.354-0.718)	0.555 (0.378-0.823)
10-min	0.171 (0.142-0.207)	0.222 (0.185-0.270)	0.291 (0.241-0.355)	0.348 (0.286-0.428)	0.427 (0.340-0.543)	0.490 (0.381-0.636)	0.555 (0.420-0.739)	0.623 (0.459-0.854)	0.719 (0.507-1.03)	0.796 (0.542-1.18)
15-min	0.207 (0.172-0.251)	0.269 (0.224-0.327)	0.352 (0.292-0.429)	0.421 (0.346-0.517)	0.517 (0.411-0.657)	0.592 (0.461-0.769)	0.671 (0.508-0.893)	0.753 (0.555-1.03)	0.869 (0.613-1.24)	0.962 (0.655-1.43)
30-min	0.307 (0.256-0.373)	0.400 (0.333-0.486)	0.524 (0.434-0.638)	0.626 (0.515-0.769)	0.769 (0.611-0.977)	0.881 (0.685-1.14)	0.997 (0.756-1.33)	1.12 (0.825-1.54)	1.29 (0.912-1.85)	1.43 (0.975-2.12)
60-min	0.450 (0.375-0.546)	0.586 (0.487-0.711)	0.766 (0.636-0.933)	0.917 (0.754-1.13)	1.13 (0.894-1.43)	1.29 (1.00-1.68)	1.46 (1.11-1.95)	1.64 (1.21-2.25)	1.89 (1.34-2.71)	2.10 (1.43-3.11)
2-hr	0.663 (0.552-0.804)	0.855 (0.711-1.04)	1.11 (0.918-1.35)	1.31 (1.08-1.61)	1.60 (1.27-2.03)	1.82 (1.41-2.36)	2.04 (1.55-2.72)	2.28 (1.68-3.13)	2.61 (1.84-3.73)	2.87 (1.95-4.25)
3-hr	0.832 (0.693-1.01)	1.07 (0.889-1.30)	1.38 (1.14-1.68)	1.63 (1.34-2.00)	1.98 (1.57-2.51)	2.24 (1.74-2.91)	2.51 (1.91-3.35)	2.79 (2.06-3.83)	3.18 (2.25-4.55)	3.49 (2.37-5.17)
6-hr	1.19 (0.991-1.44)	1.53 (1.27-1.85)	1.96 (1.63-2.39)	2.32 (1.90-2.84)	2.79 (2.22-3.55)	3.16 (2.45-4.10)	3.52 (2.67-4.69)	3.90 (2.87-5.35)	4.41 (3.12-6.32)	4.81 (3.28-7.14)
12-hr	1.60 (1.33-1.94)	2.05 (1.71-2.50)	2.64 (2.19-3.22)	3.12 (2.56-3.83)	3.74 (2.98-4.76)	4.22 (3.28-5.48)	4.70 (3.56-6.26)	5.19 (3.82-7.11)	5.84 (4.12-8.36)	6.35 (4.32-9.41)
24-hr	2.15 (1.90-2.47)	2.79 (2.47-3.22)	3.61 (3.18-4.17)	4.26 (3.73-4.97)	5.13 (4.34-6.18)	5.78 (4.80-7.11)	6.43 (5.21-8.10)	7.09 (5.59-9.18)	7.97 (6.03-10.8)	8.64 (6.32-12.1)
2-day	2.61 (2.31-3.01)	3.46 (3.06-3.99)	4.55 (4.01-5.27)	5.43 (4.75-6.34)	6.62 (5.61-7.97)	7.52 (6.24-9.25)	8.43 (6.83-10.6)	9.36 (7.37-12.1)	10.6 (8.03-14.3)	11.6 (8.47-16.1)
3-day	2.79 (2.47-3.21)	3.76 (3.32-4.33)	5.02 (4.43-5.81)	6.06 (5.30-7.07)	7.48 (6.34-9.01)	8.58 (7.12-10.6)	9.70 (7.86-12.2)	10.9 (8.56-14.1)	12.5 (9.42-16.8)	13.7 (10.0-19.1)
4-day	2.98 (2.64-3.44)	4.06 (3.59-4.68)	5.48 (4.84-6.35)	6.66 (5.83-7.77)	8.28 (7.02-9.98)	9.55 (7.92-11.7)	10.9 (8.79-13.7)	12.2 (9.63-15.8)	14.1 (10.7-19.0)	15.6 (11.4-21.7)
7-day	3.40 (3.01-3.92)	4.67 (4.13-5.39)	6.37 (5.61-7.36)	7.77 (6.80-9.06)	9.71 (8.23-11.7)	11.2 (9.33-13.8)	12.8 (10.4-16.2)	14.5 (11.4-18.8)	16.8 (12.7-22.6)	18.6 (13.6-26.0)
10-day	3.69 (3.27-4.25)	5.10 (4.51-5.89)	6.99 (6.16-8.08)	8.55 (7.48-9.98)	10.7 (9.09-12.9)	12.5 (10.3-15.3)	14.2 (11.5-17.9)	16.1 (12.7-20.9)	18.7 (14.2-25.3)	20.8 (15.3-29.1)
20-day	4.46 (3.95-5.14)	6.23 (5.51-7.19)	8.60 (7.59-9.95)	10.6 (9.27-12.4)	13.4 (11.3-16.1)	15.6 (13.0-19.2)	17.9 (14.5-22.6)	20.4 (16.1-26.4)	23.9 (18.1-32.3)	26.8 (19.6-37.3)
30-day	5.26 (4.66-6.07)	7.36 (6.51-8.49)	10.2 (8.99-11.8)	12.6 (11.0-14.7)	16.0 (13.5-19.2)	18.7 (15.5-23.0)	21.5 (17.4-27.1)	24.6 (19.4-31.8)	28.9 (21.9-39.0)	32.4 (23.7-45.3)
45-day	6.28 (5.56-7.24)	8.74 (7.73-10.1)	12.1 (10.7-14.0)	14.9 (13.1-17.4)	18.9 (16.0-22.8)	22.2 (18.4-27.3)	25.6 (20.8-32.3)	29.3 (23.1-38.0)	34.6 (26.2-46.7)	39.0 (28.5-54.4)
60-day	7.33 (6.49-8.45)	10.1 (8.95-11.7)	13.9 (12.3-16.1)	17.2 (15.0-20.0)	21.8 (18.4-26.2)	25.5 (21.2-31.4)	29.5 (23.9-37.1)	33.8 (26.6-43.7)	40.0 (30.2-53.9)	45.1 (33.0-62.9)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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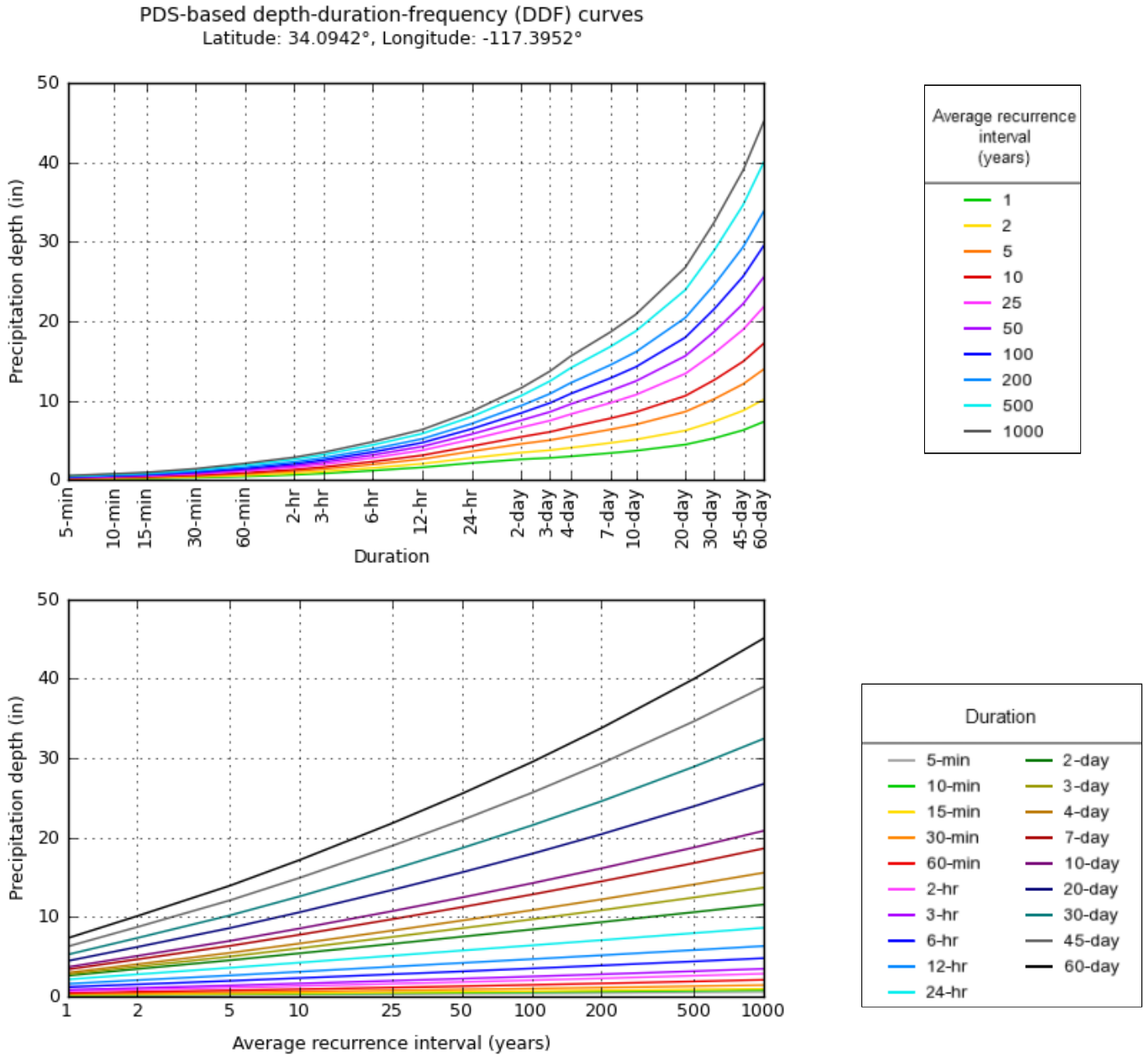
PF graphical



NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Wed Jun 2 17:44:57 2021

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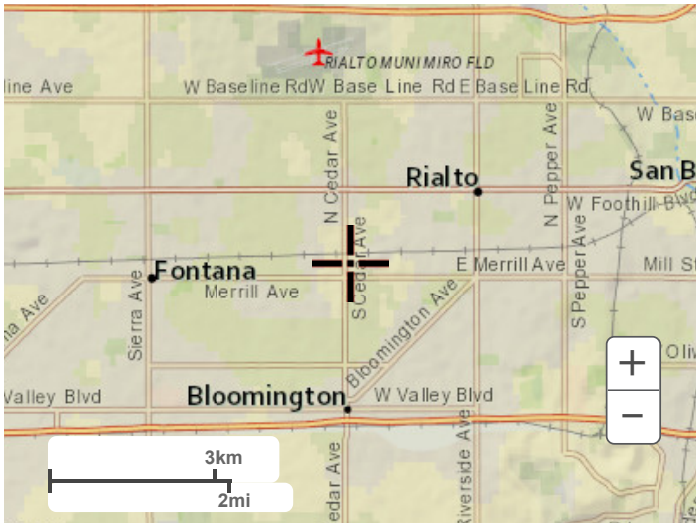
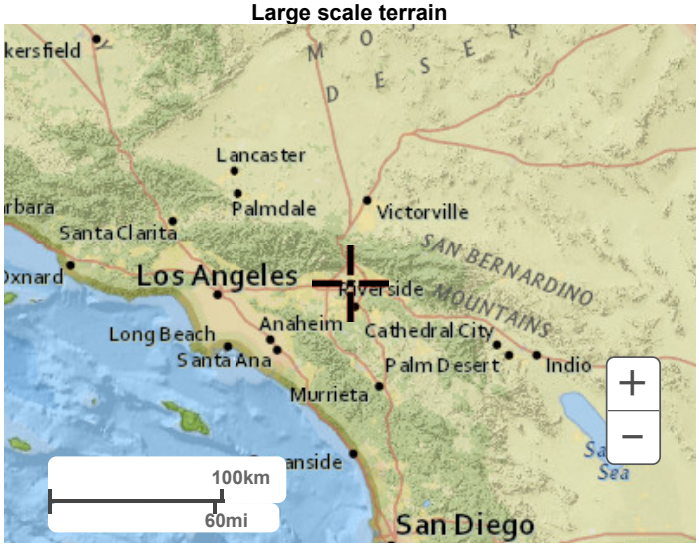
Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Section 6.5

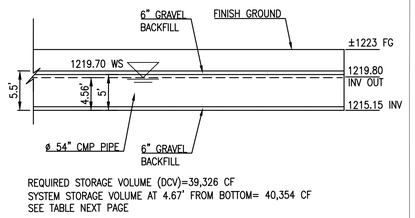
Attachment H

- Construction WQMP Exhibit 1
- Post- Development WQMP Exhibit 2

CITY OF RIALTO
HYDROLOGY EXHIBIT
CEDAR AVENUE AND DURST DRIVE
POST-DEVELOPED CONDITION

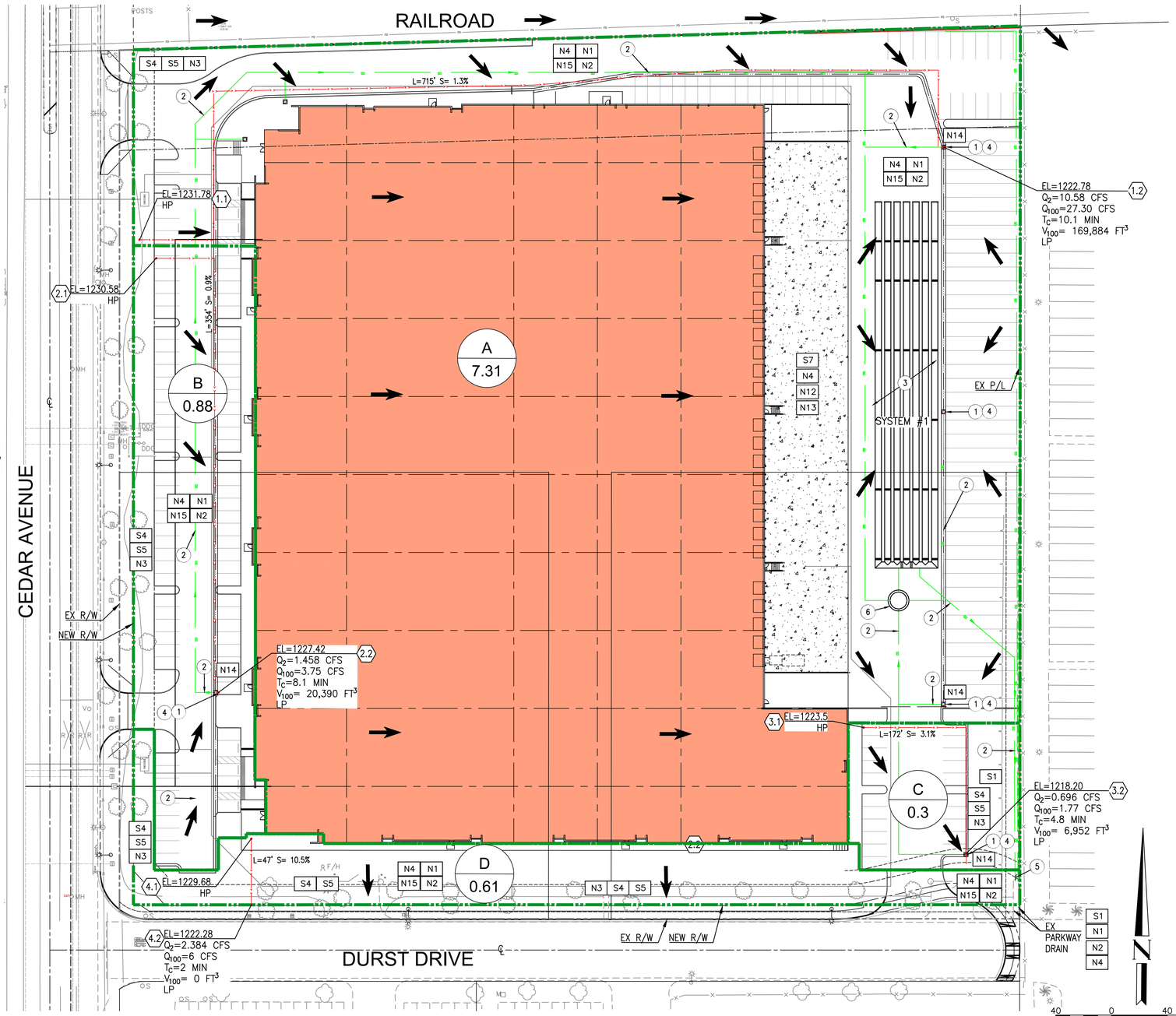
SOURCE CONTROL BMPs

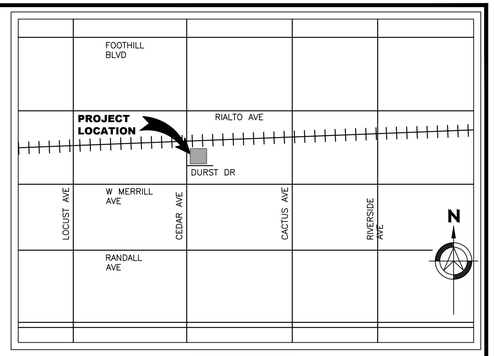
S1	STORM DRAIN STENCILING
S4	EFFICIENT IRRIGATION SYSTEM
S5	DEPRESSED LANDSCAPE AREA
S7	LOADING DECK AREA
N1	EDUCATION OF PROPERTY OWNER
N2	ACTIVITY RESTRICTIONS
N3	LANDSCAPE AREAS
N4	BMP MAINTENANCE
N12	EMPLOYEE TRAINING
N13	HOUSEKEEPING OF LOADING DOCKS
N14	CATCH BASIN INSPECTIONS
N15	VACUUM SWEEPING OF PAVED AREAS



REQUIRED STORAGE VOLUME (DCV)=39,326 CF
SYSTEM STORAGE VOLUME AT 4.67' FROM BOTTOM= 40,354 CF
SEE TABLE NEXT PAGE

WATER SURFACE ELEVATION DETAIL
N.T.S.





VICINITY MAP
N.T.S.

LEGEND:

- DRAINAGE AREA BOUNDARY
- LONGEST WATERCOURSE
- PROPOSED FLOW DIRECTION ARROW
- A / X-XXX — DRAINAGE SUB AREA DESIGNATION / AREA (AC)
- # — NODE #
- HP, LP — HIGH POINT, LOW POINT
- X% — LONGEST DRAINAGE WATERCOURSE SLOPE
- X' — LONGEST DRAINAGE WATERCOURSE
- BUILDING
- UNDERGROUND INFILTRATION SYSTEM

HYDROLOGY INFORMATION

SITE AREA:	9.38 ACRE	
SOIL GROUP:	A	(PER SBC SOIL GROUP MAP FIG. C-15)
IMPERVIOUS:	13% (PER CALCULATIONS)	
ISOHYETALS	1.46"	(100-YEAR 1 HOUR)
	0.586"	(2-YEAR 1 HOUR)
CN NUMBER:	89	(SOIL GROUP A)
FREQUENCY:	100 YEAR	(FOR STORM DARIN DESIGN)
	2 YEAR	(FOR STORMWATER QUALITY)
METHOD:	SAN BERNARDINO COUNTY HYDROLOGY MANUAL	

DRAINAGE NOTES:

1. PROPOSED CATCH BASIN WITH FILTER INSERT
2. PROPOSED STORM DRAIN PIPE PRIVATE MAINTAINED
3. PROP. LID DEVICE- CMP UNDERGROUND INFILTRATION SYSTEM
4. PROPOSED CATCH BASIN STENSIL
5. PROPOSED CONCRETE CHANNEL
6. PROPOSED CDS HYDRODYNAMIC SEPARATOR

NOTE:
1. ALL ON-SITE STORM DRAINS ARE PRIVATE STORM DRAIN SYSTEMS, NOT TO BE MAINTAINED BY THE CITY OF ONTARIO.
2. ALL ON-SITE BMP'S & UNDERGROUND INFILTRATION SYSTEMS TO BE MAINTAINED BY OWNER
3. CONTRACTOR SHALL VERIFY INFILTRATION RATES WITH SOILS ENGINEERS AFTER GRADING OPERATIONS AND PRIOR TO INSTALLATION OF UNDERGROUND INFILTRATION SYSTEM.

	BMPs / Detention Summary							
Drainage Area No.	Drainage Sub-Area	Tributary Area (AC)	Imprevious Ratio	2-YR Storm (CFS)	P6	CBMP	Required Design Capture Volume (CF)	Provided CMP infiltration system (CF)
DA1 DMA	A	7.31	0.98	10.58	0.87	0.70	39,326	45,098
	B	0.88	0.73	1.458				
	C	0.30	0.62	0.696				
	D	0.61	0.03	2.384				

PREPARED BY:
WestLAND Group, Inc. Land Surveyors • Civil Engineers • GIS
4150 CONCOURS, ONTARIO, CA 91764
PHONE: (909) 989-9789 FAX: (909) 989-9660
JOB NO: 2018-131

CEDAR AVENUE AND DURST DRIVE
POST-DEVELOPED EXHIBIT

CITY OF RIALTO

DATE: JUN 2021
SHEET 2 OF 2

Drawing Name: P:\Year_2021\2021-100 1230 W Durst Rialto - Block Creek Group\06 Engineering\LD\Reports\WQMP\3_Exhibits\2021-100_POST - Prelim.dwg Last Opened: Oct 25, 2021 - 2:32pm by: rhame.sawris

CONTECH ENGINEERED SOLUTIONS

Date: 10/13/2021
Project Name: DCV - 8449 (10-13-2021 21-55-55)

City / County:
State:

Designed By:
Company:
Telephone:

CMP: Underground Detention System
Storage Volume Estimation

=Adjustable Input Cells

Contech Engineered Solutions, LLC is pleased to offer the following estimate of storage volume for the above named project. The results are submitted as an estimate only, without liability on the part of Contech Engineered Solutions, LLC for accuracy or suitability to any particular applicaton and are subject to verification of the Engineer of Record. **This tool is only applicable for rectangular shaped systems.**

Summary of Inputs

System Information		Backfill Information		Pipe & Analysis Information	
Out-to-out length (ft):	263.0	Backfill Porosity (%):	40%	System Diameter (in):	54
Out-to-out width (ft):	45.0	Depth Above Pipe (in):	6.0	Pipe Spacing (in):	27
Number of Manifolds (ea):	1.0	Depth Below Pipe (in):	6.0	Incremental Analysis (in):	2
Number of Barrels (ea):	7.0	Width At Ends (ft):	1.0	System Invert (Elevation):	1215.15
		Width At Sides (ft):	1.0		

Storage Volume Estimation

System		Pipe		Stone		Total System		Miscellaneous	
Depth (ft)	Elevation (ft)	Incremental Storage (cf)	Cumulative Storage (cf)	Incremental Storage (cf)	Cumulative Storage (cf)	Incremental Storage (cf)	Cumulative Storage (cf)	Percent Open Storage (%)	Ave. Surface Area (sf)
0.00	1215.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	4,982.0
0.17	1215.31	0.0	0.0	830.3	830.3	830.3	830.3	0.0%	4,982.0
0.33	1215.48	0.0	0.0	830.3	1,660.7	830.3	1,660.7	0.0%	4,982.0
0.50	1215.65	0.0	0.0	830.3	2,491.0	830.3	2,491.0	0.0%	4,982.0
0.67	1215.81	352.9	352.9	689.2	3,180.2	1,042.1	3,533.1	10.0%	6,873.2
0.83	1215.98	633.8	986.7	576.8	3,757.0	1,210.6	4,743.7	20.8%	7,604.7
1.00	1216.15	804.7	1,791.4	508.5	4,265.4	1,313.1	6,056.8	29.6%	8,129.2
1.17	1216.31	933.3	2,724.7	457.0	4,722.4	1,390.3	7,447.2	36.6%	8,539.5
1.33	1216.48	1,035.9	3,760.7	416.0	5,138.4	1,451.9	8,899.1	42.3%	8,872.0
1.50	1216.65	1,119.7	4,880.4	382.4	5,520.8	1,502.2	10,401.2	46.9%	9,145.3
1.67	1216.81	1,188.8	6,069.2	354.8	5,875.7	1,543.6	11,944.8	50.8%	9,370.5
1.83	1216.98	1,245.5	7,314.7	332.1	6,207.8	1,577.6	13,522.5	54.1%	9,554.8
2.00	1217.15	1,291.6	8,606.3	313.7	6,521.5	1,605.3	15,127.8	56.9%	9,702.8
2.17	1217.31	1,328.1	9,934.3	299.1	6,820.6	1,627.2	16,754.9	59.3%	9,817.9
2.33	1217.48	1,355.8	11,290.1	288.0	7,108.6	1,643.8	18,398.7	61.4%	9,902.5
2.50	1217.65	1,375.2	12,665.3	280.3	7,388.9	1,655.5	20,054.2	63.2%	9,958.1
2.67	1217.81	1,386.7	14,052.0	275.6	7,664.5	1,662.4	21,716.5	64.7%	9,985.7
2.83	1217.98	1,390.6	15,442.6	274.1	7,938.6	1,664.7	23,381.2	66.0%	9,985.7
3.00	1218.15	1,386.7	16,829.3	275.6	8,214.3	1,662.4	25,043.6	67.2%	9,958.1
3.17	1218.31	1,375.2	18,204.5	280.3	8,494.5	1,655.5	26,699.0	68.2%	9,902.5
3.33	1218.48	1,355.8	19,560.2	288.0	8,782.6	1,643.8	28,342.8	69.0%	9,817.9
3.50	1218.65	1,328.1	20,888.3	299.1	9,081.7	1,627.2	29,970.0	69.7%	9,702.8
3.67	1218.81	1,291.6	22,179.9	313.7	9,395.4	1,605.3	31,575.2	70.2%	9,554.8
3.83	1218.98	1,245.5	23,425.4	332.1	9,727.5	1,577.6	33,152.9	70.7%	9,370.5
4.00	1219.15	1,188.8	24,614.2	354.8	10,082.3	1,543.6	34,696.5	70.9%	9,145.3
4.17	1219.31	1,119.7	25,733.9	382.4	10,464.8	1,502.2	36,198.7	71.1%	8,872.0
4.33	1219.48	1,035.9	26,769.8	416.0	10,880.7	1,451.9	37,650.6	71.1%	8,539.5
4.50	1219.65	933.3	27,703.1	457.0	11,337.7	1,390.3	39,040.9	71.0%	8,129.2
4.67	1219.81	804.7	28,507.8	508.5	11,846.2	1,313.1	40,354.0	70.6%	7,604.7
4.83	1219.98	633.8	29,141.6	576.8	12,423.0	1,210.6	41,564.7	70.1%	6,873.2
5.00	1220.15	352.9	29,494.5	689.2	13,112.2	1,042.1	42,606.7	69.2%	4,982.0
5.17	1220.31	0.0	29,494.5	830.3	13,942.5	830.3	43,437.1	67.9%	4,982.0
5.33	1220.48	0.0	29,494.5	830.3	14,772.8	830.3	44,267.4	66.6%	4,982.0
5.50	1220.65	0.0	29,494.5	830.3	15,603.2	830.3	45,097.7	65.4%	4,982.0

These results are submitted to you as a guideline only, without liability on the part of CONTECH Engineered Solutions, LLC for accuracy or suitability to any particular application, and are subject to your verification.

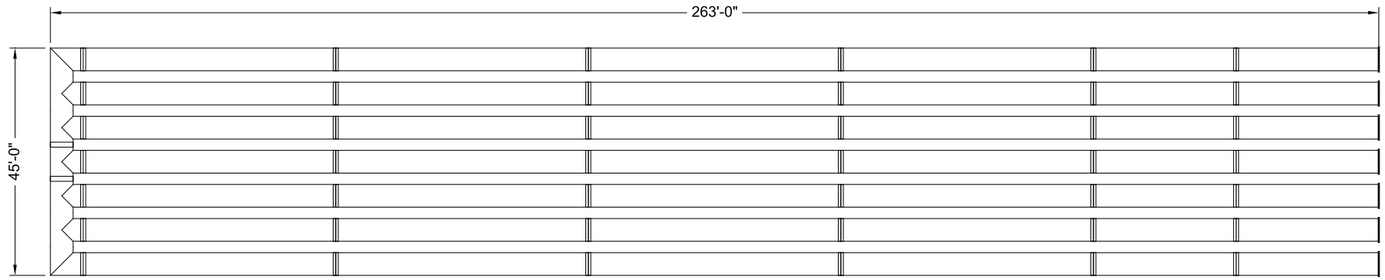
PROJECT SUMMARY

CALCULATION DETAILS
- LOADING = HS20 & HS25
- APPROX. LINEAR FOOTAGE = 1,855 lf.

STORAGE SUMMARY
- STORAGE VOLUME REQUIRED = 45,000 cf.
- PIPE STORAGE VOLUME = 29,495 cf.
- BACKFILL STORAGE VOLUME = 15,603 cf.
- TOTAL STORAGE PROVIDED = 45,098 cf.

PIPE DETAILS
- DIAMETER = 54 IN.
- CORRUGATION = 5x1
- GAGE = 16
- COATING = ALT2
- WALL TYPE = Perforated
- BARRELL SPACING = 27 IN.

BACKFILL DETAILS
- WIDTH AT ENDS = 12 IN.
- ABOVE PIPE = 6 IN.
- WIDTH AT SIDES = 12 IN.
- BELOW PIPE = 6 IN.



NOTES

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE. ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
- ALL RISERS AND STUBS ARE $2\frac{2}{3}$" x $\frac{1}{2}$" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- BAND TYPE TO BE DETERMINED UPON FINAL DESIGN.
- THE PROJECT SUMMARY IS REFLECTIVE OF THE DYODS DESIGN, QUANTITIES ARE APPROX. AND SHOULD BE VERIFIED UPON FINAL DESIGN AND APPROVAL. FOR EXAMPLE, TOTAL EXCAVATION DOES NOT CONSIDER ALL VARIABLES SUCH AS SHORING AND ONLY ACCOUNTS FOR MATERIAL WITHIN THE ESTIMATED EXCAVATION FOOTPRINT.
- THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.

ASSEMBLY

SCALE: 1" = 30'

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DATE	REVISION DESCRIPTION	BY

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CONTECH® CMP DETENTION SYSTEMS
CONTECH **DYODS** DRAWING

DYO8449 RIALTO 2
DCV
Rialto, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
5269	8449	10/13/2021
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D1		

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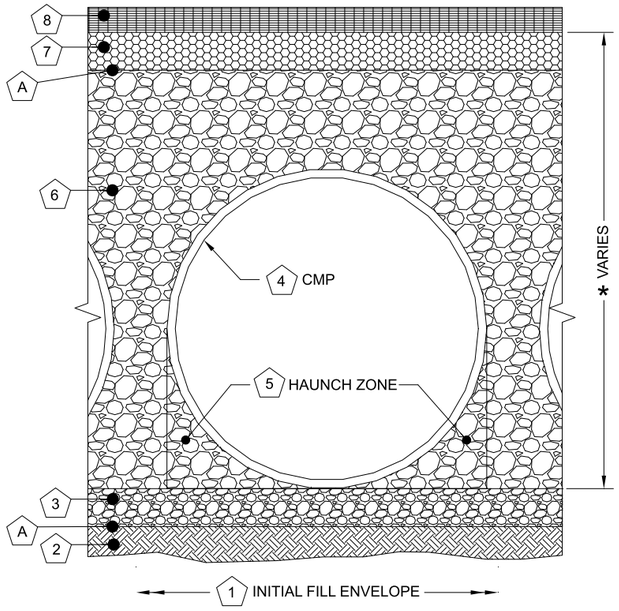


Infiltration Systems - CMP Infiltration & CMP Perforated Drainage Pipe			
Material Location	Description	Material Designation	Designation
8 Rigid or Flexible Pavement (if applicable)			
7 Road Base (if applicable			
A Geotextile Layer	Non-Woven Geotextile	CONTECH C-40 or C-45	Engineer Decision for consideration to prevent soil migration into varying soil types. Wrap the trench only.
6 Backfill	Infiltration pipe systems have a pipe perforation sized of 3/8" diameter. An open graded, free draining stone, with a particle size of ½" – 2 ½" diameter is recommended.	AASHTO M 145-A-1 or AASHTO M 43 - 3, 4	Material shall be worked into the pipe haunches by means of shovel-slicing, rodding, air-tamper, vibratory rod, or other effective methods. Compaction of all placed fill material is necessary and shall be considered adequate when no further yielding of the material is observed under the compactor, or under foot, and the Project Engineer or his representative is satisfied with the level of compaction"
3 Bedding Stone	Well graded granular bedding material w/maximum particle size of 3"	AASHTO M43 - 3,357,4,467, 5, 56, 57	For soil aggregates larger than 3/8" a dedicated bedding layer is not required for CMP. Pipe may be placed on the trench bottom comprised of native suitable well graded & granular material. For Arch pipes it is recommended to be shaped to a relatively flat bottom or fine-grade the foundation to a slight v-shape. Soil aggregates less than 3/8" and unsuitable material should be over-excavated and re-placed with a 4"-6" layer of well graded & granular stone per the material designation.
A Geotextile Layer	None	None	Contech does not recommend geotextiles be placed under the invert of Infiltration systems due to the propensity for geotextiles to clog over time.
* Note: The listed AASHTO designations are for gradation only. The stone must also be angular and clean.			

1 MINIMUM WIDTH DEPENDS ON SITE CONDITIONS AND ENGINEERING JUDGEMENT.

FOUNDATION/BEDDING PREPARATION

2 PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND BROUGHT BACK TO THE GRADE WITH A FILL MATERIAL AS APPROVED BY THE ENGINEER.

5 HAUNCH ZONE MATERIAL SHALL BE PLACED AND UNIFORMLY COMPACTED WITHOUT SOFT SPOTS.

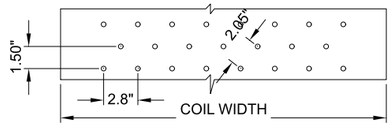
BACKFILL

MATERIAL SHALL BE PLACED IN 8"-10" MAXIMUM LIFTS. INADEQUATE COMPACTION CAN LEAD TO EXCESSIVE DEFLECTIONS WITHIN THE SYSTEM AND SETTLEMENT OF THE SOILS OVER THE SYSTEM. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO-LIFT DIFFERENTIAL BETWEEN THE SIDES OF ANY PIPE IN THE SYSTEM AT ALL TIMES DURING THE BACKFILL PROCESS. BACKFILL SHALL BE ADVANCED ALONG THE LENGTH OF THE SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON ANY PIPES IN THE SYSTEM.

EQUIPMENT USED TO PLACE AND COMPACT THE BACKFILL SHALL BE OF A SIZE AND TYPE SO AS NOT TO DISTORT, DAMAGE, OR DISPLACE THE PIPE. ATTENTION MUST BE GIVEN TO PROVIDING ADEQUATE MINIMUM COVER FOR SUCH EQUIPMENT. MAINTAIN BALANCED LOADING ON ALL PIPES IN THE SYSTEM DURING ALL SUCH OPERATIONS.

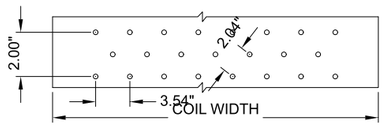
OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS. REFER TO TYPICAL BACKFILL DETAIL FOR MATERIAL REQUIRED.

2 2/3" x 1/2" CORRUGATION - STEEL AND ALUMINUM CMP EDGE SPACING EQUAL ON BOTH SIDES



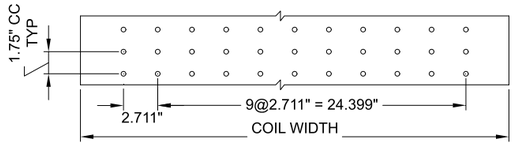
OPEN AREA = 3.76 SQ IN/SQ FT

3" x 1" CORRUGATION - STEEL AND ALUMINUM CMP (COIL PROVIDED FROM CONTECH LANTANA, FL PLANT)



OPEN AREA = 4.16 SQ IN/SQ FT

5" x 1" CORRUGATION - STEEL ONLY
EDGE SPACING EQUAL ON BOTH SIDES



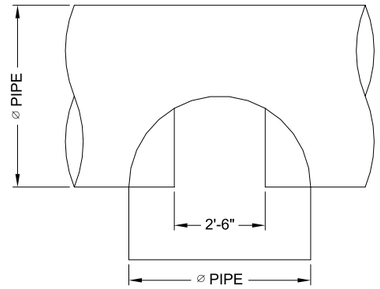
OPEN AREA = 3.33 SQ IN/SQ FT

NOTES:

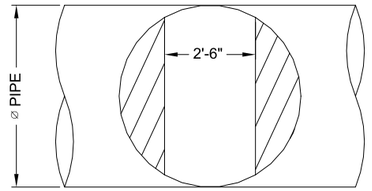
1. PERFORATIONS MEET AASHTO AND ASTM SPECIFICATIONS.
2. PERFORATION OPEN AREA PER SQUARE FOOT OF PIPE IS BASED ON THE NOMINAL DIAMETER AND LENGTH OF PIPE.
3. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
4. ALL HOLES ⌀3/8".

TYPICAL PERFORATION DETAIL

SCALE: N.T.S.



PLAN

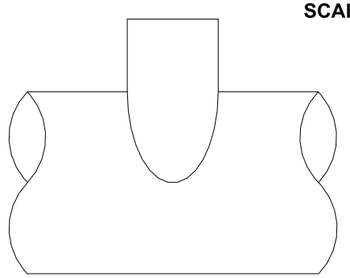


FRONT

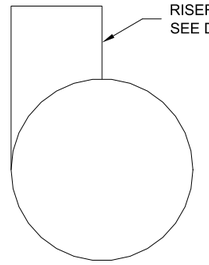
TYPICAL MANWAY DETAIL

SCALE: N.T.S.

NOTE:
MANWAY DETAIL APPLICABLE FOR CMP SYSTEMS WITH DIAMETERS 48" AND LARGER. MANWAYS MAY BE REQUIRED ON SMALLER SYSTEMS DEPENDING ON ACTUAL SITE SPECIFIC CONDITIONS.



ELEVATION

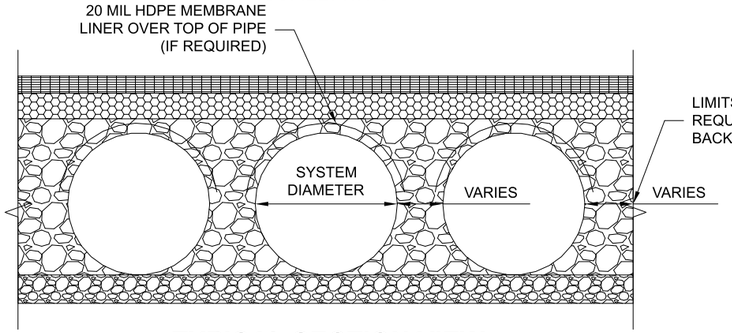


END

NOTE:
LADDERS ARE OPTIONAL AND ARE NOT REQUIRED FOR ALL SYSTEMS.

TYPICAL RISER DETAIL

SCALE: N.T.S.



TYPICAL SECTION VIEW

LINER OVER ROWS
SCALE: N.T.S.

NOTE: IF SALTING AGENTS FOR SNOW AND ICE REMOVAL ARE USED ON OR NEAR THE PROJECT, AN HDPE MEMBRANE LINER IS RECOMMENDED WITH THE SYSTEM. THE IMPERMEABLE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM A CHANGE IN THE SURROUNDING ENVIRONMENT OVER A PERIOD OF TIME. PLEASE REFER TO THE CORRUGATED METAL PIPE DETENTION DESIGN GUIDE FOR ADDITIONAL INFORMATION.

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DATE	REVISION DESCRIPTION	BY

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CONTECH CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO8449 RIALTO 2
DCV
Rialto, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
5269	8449	10/13/2021
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D2		

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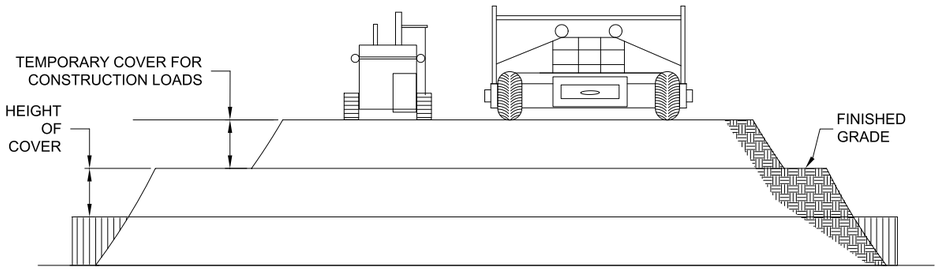


CONSTRUCTION LOADS

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)			
	18-50	50-75	75-110	110-150
	MINIMUM COVER (FT)			
12-42	2.0	2.5	3.0	3.0
48-72	3.0	3.0	3.5	4.0
78-120	3.0	3.5	4.0	4.0
126-144	3.5	4.0	4.5	4.5

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

CONSTRUCTION LOADING DIAGRAM

SCALE: N.T.S.

SPECIFICATION FOR DESIGNED DETENTION SYSTEM:

SCOPE
THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE DESIGNED DETENTION SYSTEM DETAILED IN THE PROJECT PLANS.

MATERIAL
THE MATERIAL SHALL CONFORM TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-274 OR ASTM A-92.

THE GALVANIZED STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-218 OR ASTM A-929.

THE POLYMER COATED STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-246 OR ASTM A-742.

THE ALUMINUM COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-197 OR ASTM B-744.

CONSTRUCTION LOADS
CONSTRUCTION LOADS MAY BE HIGHER THAN FINAL LOADS. FOLLOW THE MANUFACTURER'S OR NCSPA GUIDELINES.

PIPE
THE PIPE SHALL BE MANUFACTURED IN ACCORDANCE TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2: AASHTO M-36 OR ASTM A-760

GALVANIZED: AASHTO M-36 OR ASTM A-760

POLYMER COATED: AASHTO M-245 OR ASTM A-762

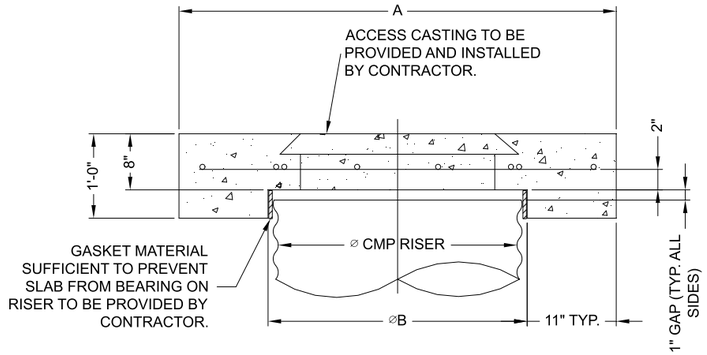
ALUMINUM: AASHTO M-196 OR ASTM B-745

HANDLING AND ASSEMBLY
SHALL BE IN ACCORDANCE WITH NCSP'S (NATIONAL CORRUGATED STEEL PIPE ASSOCIATION) FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL. SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR ALUMINUM PIPE.

INSTALLATION
SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II DIVISION II OR ASTM A-798 (FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL) OR ASTM B-788 (FOR ALUMINUM PIPE) AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

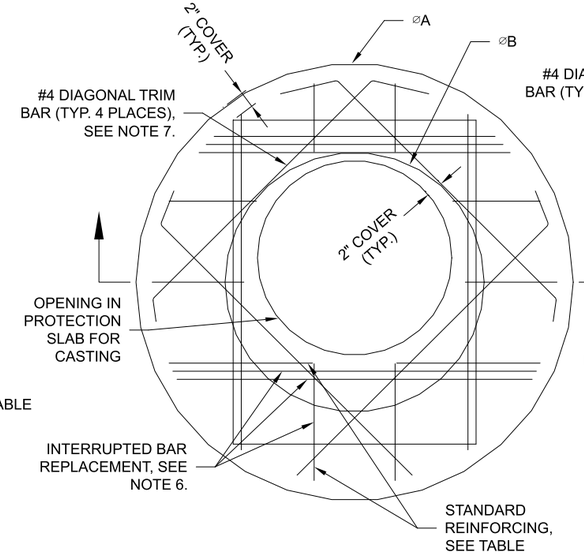
NOTE:
THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.



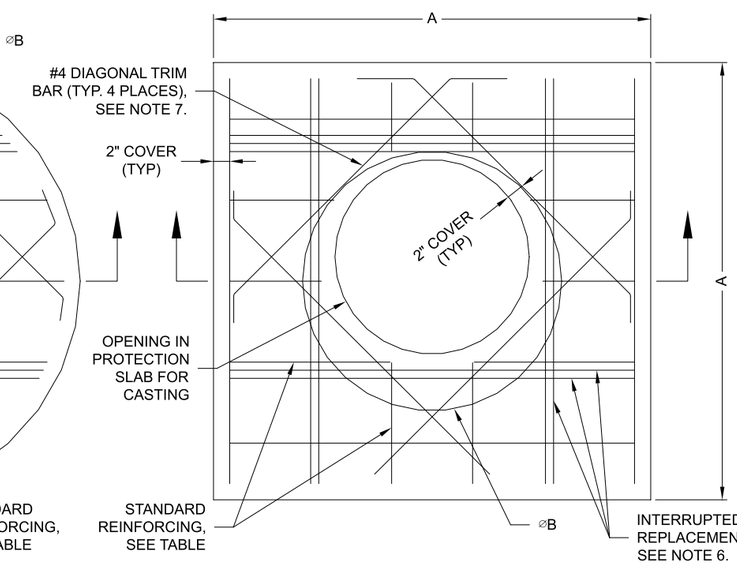
SECTION VIEW

REINFORCING TABLE				
⌀ CMP RISER	A	⌀ B	REINFORCING	**BEARING PRESSURE (PSF)
24"	⌀ 4' 4'X4'	26"	#5 @ 12" OCEW #5 @ 12" OCEW	2,410 1,780
30"	⌀ 4'-6" 4'-6" X 4'-6"	32"	#5 @ 12" OCEW #5 @ 12" OCEW	2,120 1,530
36"	⌀ 5' 5' X 5'	38"	#5 @ 10" OCEW #5 @ 10" OCEW	1,890 1,350
42"	⌀ 5'-6" 5'-6" X 5'-6"	44"	#5 @ 10" OCEW #5 @ 9" OCEW	1,720 1,210
48"	⌀ 6' 6' X 6'	50"	#5 @ 9" OCEW #5 @ 8" OCEW	1,600 1,100

** ASSUMED SOIL BEARING CAPACITY



ROUND OPTION PLAN VIEW



SQUARE OPTION PLAN VIEW

NOTES:

1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION.
2. DESIGN LOAD HS25.
3. EARTH COVER = 1' MAX.
4. CONCRETE STRENGTH = 3,500 psi
5. REINFORCING STEEL = ASTM A615, GRADE 60.
6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
9. DETAIL DESIGN BY DELTA ENGINEERING, BINGHAMTON, NY.

MANHOLE CAP DETAIL

SCALE: N.T.S.

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800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO8449 RIALTO 2
DCV
Rialto, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
5269	8449	10/13/2021
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D3		

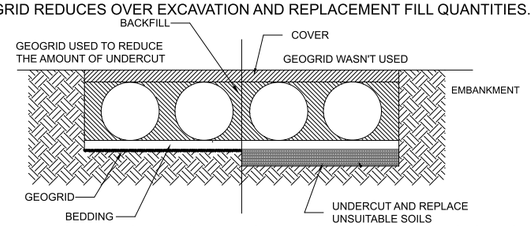
CMP DETENTION INSTALLATION GUIDE

PROPER INSTALLATION OF A FLEXIBLE UNDERGROUND DETENTION SYSTEM WILL ENSURE LONG-TERM PERFORMANCE. THE CONFIGURATION OF THESE SYSTEMS OFTEN REQUIRES SPECIAL CONSTRUCTION PRACTICES THAT DIFFER FROM CONVENTIONAL FLEXIBLE PIPE CONSTRUCTION. CONTECH ENGINEERED SOLUTIONS STRONGLY SUGGESTS SCHEDULING A PRE-CONSTRUCTION MEETING WITH YOUR LOCAL SALES ENGINEER TO DETERMINE IF ADDITIONAL MEASURES, NOT COVERED IN THIS GUIDE, ARE APPROPRIATE FOR YOUR SITE.

FOUNDATION

CONSTRUCT A FOUNDATION THAT CAN SUPPORT THE DESIGN LOADING APPLIED BY THE PIPE AND ADJACENT BACKFILL WEIGHT AS WELL AS MAINTAIN ITS INTEGRITY DURING CONSTRUCTION.

IF SOFT OR UNSUITABLE SOILS ARE ENCOUNTERED, REMOVE THE POOR SOILS DOWN TO A SUITABLE DEPTH AND THEN BUILD UP TO THE APPROPRIATE ELEVATION WITH A COMPETENT BACKFILL MATERIAL. THE STRUCTURAL FILL MATERIAL GRADATION SHOULD NOT ALLOW THE MIGRATION OF FINES, WHICH CAN CAUSE SETTLEMENT OF THE DETENTION SYSTEM OR PAVEMENT ABOVE. IF THE STRUCTURAL FILL MATERIAL IS NOT COMPATIBLE WITH THE UNDERLYING SOILS AN ENGINEERING FABRIC SHOULD BE USED AS A SEPARATOR. IN SOME CASES, USING A STIFF REINFORCING GEOGRID REDUCES OVER EXCAVATION AND REPLACEMENT FILL QUANTITIES.

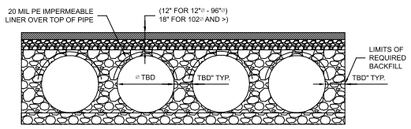


GRADE THE FOUNDATION SUBGRADE TO A UNIFORM OR SLIGHTLY SLOPING GRADE. IF THE SUBGRADE IS CLAY OR RELATIVELY NON-POROUS AND THE CONSTRUCTION SEQUENCE WILL LAST FOR AN EXTENDED PERIOD OF TIME, IT IS BEST TO SLOPE THE GRADE TO ONE END OF THE SYSTEM. THIS WILL ALLOW EXCESS WATER TO DRAIN QUICKLY, PREVENTING SATURATION OF THE SUBGRADE.

GEOMEMBRANE BARRIER

A SITE'S RESISTIVITY MAY CHANGE OVER TIME WHEN VARIOUS TYPES OF SALTING AGENTS ARE USED, SUCH AS ROAD SALTS FOR DEICING AGENTS. IF SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE, A GEOMEMBRANE BARRIER IS RECOMMENDED WITH THE SYSTEM. THE GEOMEMBRANE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM THE USE OF SUCH AGENTS INCLUDING PREMATURE CORROSION AND REDUCED ACTUAL SERVICE LIFE.

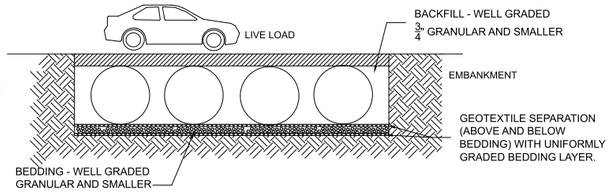
THE PROJECT'S ENGINEER OF RECORD IS TO EVALUATE WHETHER SALTING AGENTS WILL BE USED ON OR NEAR THE PROJECT SITE, AND USE HIS/HER BEST JUDGEMENT TO DETERMINE IF ANY ADDITIONAL PROTECTIVE MEASURES ARE REQUIRED. BELOW IS A TYPICAL DETAIL SHOWING THE PLACEMENT OF A GEOMEMBRANE BARRIER FOR PROJECTS WHERE SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE.



IN-SITU TRENCH WALL

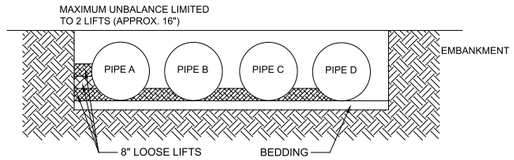
IF EXCAVATION IS REQUIRED, THE TRENCH WALL NEEDS TO BE CAPABLE OF SUPPORTING THE LOAD THAT THE PIPE SHEDS AS THE SYSTEM IS LOADED. IF SOILS ARE NOT CAPABLE OF SUPPORTING THESE LOADS, THE PIPE CAN DEFLECT. PERFORM A SIMPLE SOIL PRESSURE CHECK USING THE APPLIED LOADS TO DETERMINE THE LIMITS OF EXCAVATION BEYOND THE SPRING LINE OF THE OUTER MOST PIPES.

IN MOST CASES THE REQUIREMENTS FOR A SAFE WORK ENVIRONMENT AND PROPER BACKFILL PLACEMENT AND COMPACTION TAKE CARE OF THIS CONCERN.



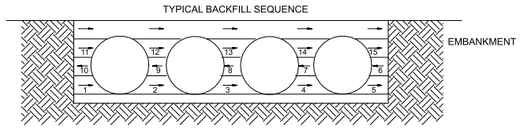
BACKFILL PLACEMENT

MATERIAL SHALL BE WORKED INTO THE PIPE HAUNCHES BY MEANS OF SHOVEL-SLICING, RODDING, AIR TAMPER, VIBRATORY ROD, OR OTHER EFFECTIVE METHODS.

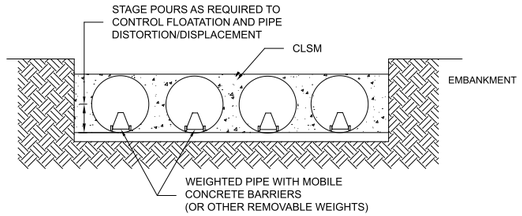


IF AASHTO T99 PROCEDURES ARE DETERMINED INFEASIBLE BY THE GEOTECHNICAL ENGINEER OF RECORD, COMPACTION IS CONSIDERED ADEQUATE WHEN NO FURTHER YIELDING OF THE MATERIAL IS OBSERVED UNDER THE COMPACTOR, OR UNDER FOOT, AND THE GEOTECHNICAL ENGINEER OF RECORD (OR REPRESENTATIVE THEREOF) IS SATISFIED WITH THE LEVEL OF COMPACTION.

FOR LARGE SYSTEMS, CONVEYOR SYSTEMS, BACKHOES WITH LONG REACHES OR DRAGLINES WITH STONE BUCKETS MAY BE USED TO PLACE BACKFILL. ONCE MINIMUM COVER FOR CONSTRUCTION LOADING ACROSS THE ENTIRE WIDTH OF THE SYSTEM IS REACHED, ADVANCE THE EQUIPMENT TO THE END OF THE RECENTLY PLACED FILL, AND BEGIN THE SEQUENCE AGAIN UNTIL THE SYSTEM IS COMPLETELY BACKFILLED. THIS TYPE OF CONSTRUCTION SEQUENCE PROVIDES ROOM FOR STOCKPILED BACKFILL DIRECTLY BEHIND THE BACKHOE, AS WELL AS THE MOVEMENT OF CONSTRUCTION TRAFFIC. MATERIAL STOCKPILES ON TOP OF THE BACKFILLED DETENTION SYSTEM SHOULD BE LIMITED TO 8- TO 10-FEET HIGH AND MUST PROVIDE BALANCED LOADING ACROSS ALL BARRELS. TO DETERMINE THE PROPER COVER OVER THE PIPES TO ALLOW THE MOVEMENT OF CONSTRUCTION EQUIPMENT SEE TABLE 1, OR CONTACT YOUR LOCAL CONTECH SALES ENGINEER.



WHEN FLOWABLE FILL IS USED, YOU MUST PREVENT PIPE FLOATATION. TYPICALLY, SMALL LIFTS ARE PLACED BETWEEN THE PIPES AND THEN ALLOWED TO SET-UP PRIOR TO THE PLACEMENT OF THE NEXT LIFT. THE ALLOWABLE THICKNESS OF THE CLSM LIFT IS A FUNCTION OF A PROPER BALANCE BETWEEN THE UPLIFT FORCE OF THE CLSM, THE OPPOSING WEIGHT OF THE PIPE, AND THE EFFECT OF OTHER RESTRAINING MEASURES. THE PIPE CAN CARRY LIMITED FLUID PRESSURE WITHOUT PIPE DISTORTION OR DISPLACEMENT, WHICH ALSO AFFECTS THE CLSM LIFT THICKNESS. YOUR LOCAL CONTECH SALES ENGINEER CAN HELP DETERMINE THE PROPER LIFT THICKNESS.

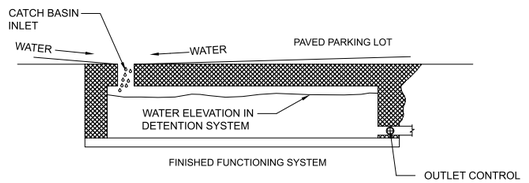


CONSTRUCTION LOADING

TYPICALLY, THE MINIMUM COVER SPECIFIED FOR A PROJECT ASSUMES H-20 LIVE LOAD. BECAUSE CONSTRUCTION LOADS OFTEN EXCEED DESIGN LIVE LOADS, INCREASED TEMPORARY MINIMUM COVER REQUIREMENTS ARE NECESSARY. SINCE CONSTRUCTION EQUIPMENT VARIES FROM JOB TO JOB, IT IS BEST TO ADDRESS EQUIPMENT SPECIFIC MINIMUM COVER REQUIREMENTS WITH YOUR LOCAL CONTECH SALES ENGINEER DURING YOUR PRE-CONSTRUCTION MEETING.

ADDITIONAL CONSIDERATIONS

BECAUSE MOST SYSTEMS ARE CONSTRUCTED BELOW-GRADE, RAINFALL CAN RAPIDLY FILL THE EXCAVATION; POTENTIALLY CAUSING FLOATATION AND MOVEMENT OF THE PREVIOUSLY PLACED PIPES. TO HELP MITIGATE POTENTIAL PROBLEMS, IT IS BEST TO START THE INSTALLATION AT THE DOWNSTREAM END WITH THE OUTLET ALREADY CONSTRUCTED TO ALLOW A ROUTE FOR THE WATER TO ESCAPE. TEMPORARY DIVERSION MEASURES MAY BE REQUIRED FOR HIGH FLOWS DUE TO THE RESTRICTED NATURE OF THE OUTLET PIPE.



CMP DETENTION SYSTEM INSPECTION AND MAINTENANCE

UNDERGROUND STORMWATER DETENTION AND INFILTRATION SYSTEMS MUST BE INSPECTED AND MAINTAINED AT REGULAR INTERVALS FOR PURPOSES OF PERFORMANCE AND LONGEVITY.

INSPECTION

INSPECTION IS THE KEY TO EFFECTIVE MAINTENANCE OF CMP DETENTION SYSTEMS AND IS EASILY PERFORMED. CONTECH RECOMMENDS ONGOING, ANNUAL INSPECTIONS. SITES WITH HIGH TRASH LOAD OR SMALL OUTLET CONTROL ORIFICES MAY NEED MORE FREQUENT INSPECTIONS. THE RATE AT WHICH THE SYSTEM COLLECTS POLLUTANTS WILL DEPEND MORE ON SITE SPECIFIC ACTIVITIES RATHER THAN THE SIZE OR CONFIGURATION OF THE SYSTEM.

INSPECTIONS SHOULD BE PERFORMED MORE OFTEN IN EQUIPMENT WASHDOWN AREAS, IN CLIMATES WHERE SANDING AND/OR SALTING OPERATIONS TAKE PLACE, AND IN OTHER VARIOUS INSTANCES IN WHICH ONE WOULD EXPECT HIGHER ACCUMULATIONS OF SEDIMENT OR ABRASIVE/ CORROSIVE CONDITIONS. A RECORD OF EACH INSPECTION IS TO BE MAINTAINED FOR THE LIFE OF THE SYSTEM

MAINTENANCE

CMP DETENTION SYSTEMS SHOULD BE CLEANED WHEN AN INSPECTION REVEALS ACCUMULATED SEDIMENT OR TRASH IS CLOGGING THE DISCHARGE ORIFICE.

ACCUMULATED SEDIMENT AND TRASH CAN TYPICALLY BE EVACUATED THROUGH THE MANHOLE OVER THE OUTLET ORIFICE. IF MAINTENANCE IS NOT PERFORMED AS RECOMMENDED, SEDIMENT AND TRASH MAY ACCUMULATE IN FRONT OF THE OUTLET ORIFICE. MANHOLE COVERS SHOULD BE SECURELY SEATED FOLLOWING CLEANING ACTIVITIES. CONTECH SUGGESTS THAT ALL SYSTEMS BE DESIGNED WITH AN ACCESS/INSPECTION MANHOLE SITUATED AT OR NEAR THE INLET AND THE OUTLET ORIFICE. SHOULD IT BE NECESSARY TO GET INSIDE THE SYSTEM TO PERFORM MAINTENANCE ACTIVITIES, ALL APPROPRIATE PRECAUTIONS REGARDING CONFINED SPACE ENTRY AND OSHA REGULATIONS SHOULD BE FOLLOWED.

ANNUAL INSPECTIONS ARE BEST PRACTICE FOR ALL UNDERGROUND SYSTEMS. DURING THIS INSPECTION, IF EVIDENCE OF SALTING/DE-ICING AGENTS IS OBSERVED WITHIN THE SYSTEM, IT IS BEST PRACTICE FOR THE SYSTEM TO BE RINSED, INCLUDING ABOVE THE SPRING LINE SOON AFTER THE SPRING THAW AS PART OF THE MAINTENANCE PROGRAM FOR THE SYSTEM.

MAINTAINING AN UNDERGROUND DETENTION OR INFILTRATION SYSTEM IS EASIEST WHEN THERE IS NO FLOW ENTERING THE SYSTEM. FOR THIS REASON, IT IS A GOOD IDEA TO SCHEDULE THE CLEANOUT DURING DRY WEATHER.

THE FOREGOING INSPECTION AND MAINTENANCE EFFORTS HELP ENSURE UNDERGROUND PIPE SYSTEMS USED FOR STORMWATER STORAGE CONTINUE TO FUNCTION AS INTENDED BY IDENTIFYING RECOMMENDED REGULAR INSPECTION AND MAINTENANCE PRACTICES. INSPECTION AND MAINTENANCE RELATED TO THE STRUCTURAL INTEGRITY OF THE PIPE OR THE SOUNDNESS OF PIPE JOINT CONNECTIONS IS BEYOND THE SCOPE OF THIS GUIDE.

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CONTECH CMP DETENTION SYSTEMS

CONTECH **DYODS** DRAWING

DYO8449 RIALTO 2
DCV
Rialto, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
5269	8449	10/13/2021
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D4		

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Section 7 Cedar Avenue Drainage Study

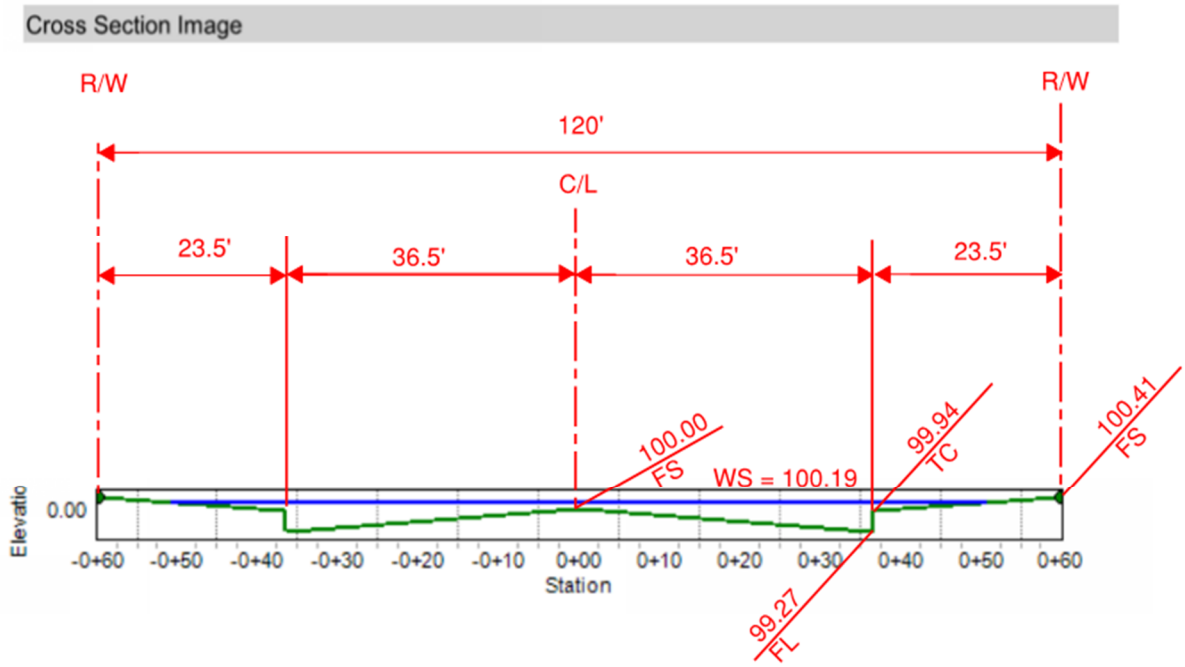
From the City master plan of drainage (Attached), the site is located between hydraulic nodes 521 and 619, the master plan of drainage indicates the non-existence of any storm drain system along Cedar between node 521 (the Rail Road) and node 619 (Merrill Avenue), therefore a drainage study has been done to calculate the capacity of Cedar Avenue along the project site as follow:

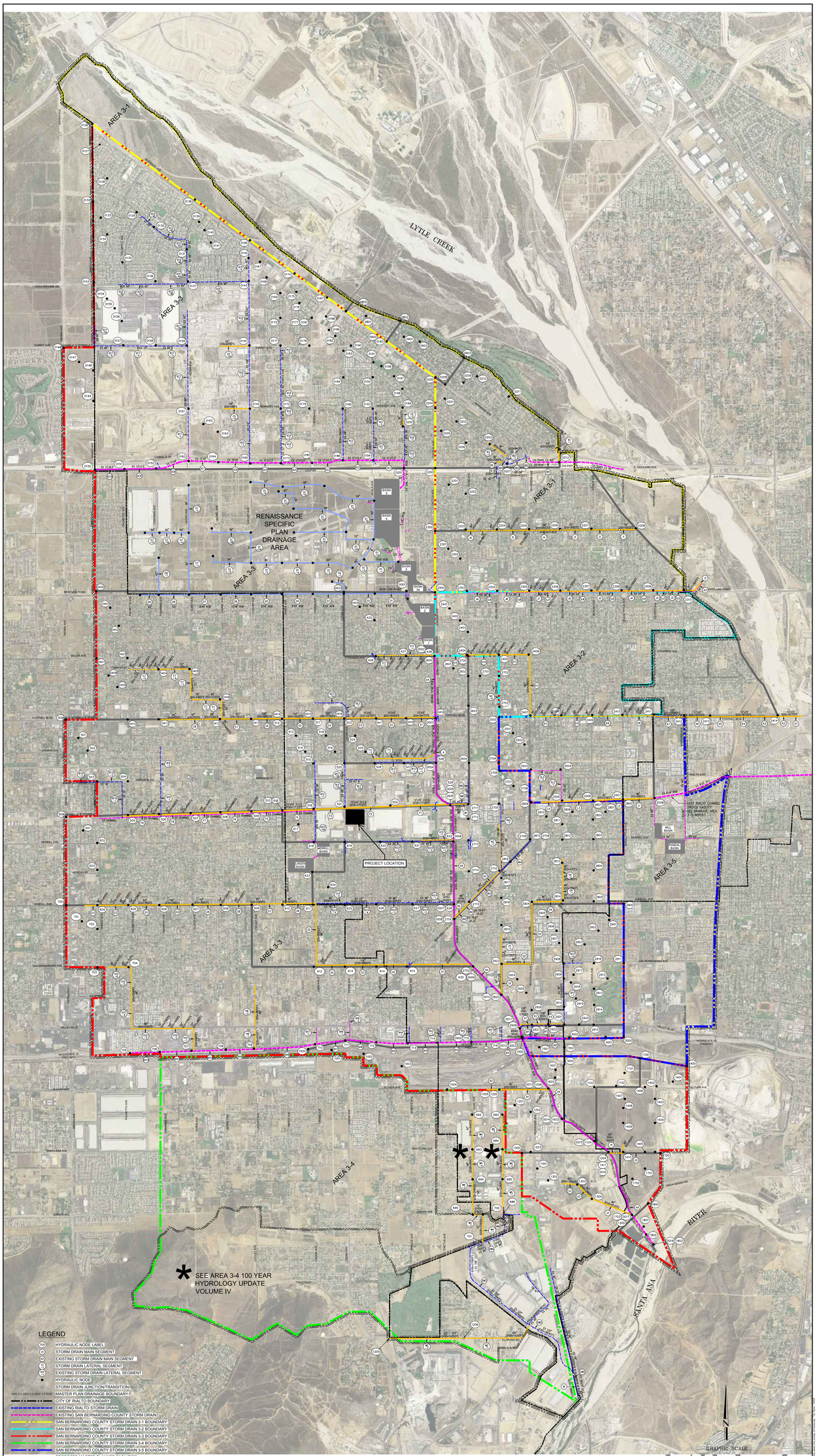
Per the "Cedar at Merrill SD Feasibility Study- drainage exhibit" provided by the City of Rialto (Attached), Cedar Ave along the project site is receiving a Q_{100} = 411.1 CFS from node 109 at Cedar Avenue and Arrow Boulevard in addition to 3.5 CFS from area "A" from Arrow Boulevard to south west corner of the project site.

- Q_{100} = 411.1 +3.5 = 415 CFS
- Street slope = 2.5%
- Street width = 120' (Right-of-way to Right-of-way) and 73' (Existing curb to Existing curb)
- Cross fall 2% (East and West)
- 8" Curb and Gutter both sides

Project Description			
Friction Method	Manning Formula		
Solve For	Normal Depth		
Input Data			
Channel Slope		0.02500	ft/ft
Normal Depth		0.92	ft
Discharge		415.00	ft^3/s

The Cross Section below shows that the water level for Q_{100} is lower than the right of way elevation by 0.22’





Hall & Foreman, Inc.
Engineering • Planning • Surveying
11782 E. 17TH STREET, SUITE 200 • TUSTIN, CA 92780 • 714-665-4500

APPROVED BY: _____ DATE: _____

FIELD BOOK REF.

MARK	REVISIONS	APPR.	DATE

REGISTERED PROFESSIONAL ENGINEER No. 30431 Exp. 03/31/10 CIVIL STATE OF CALIFORNIA

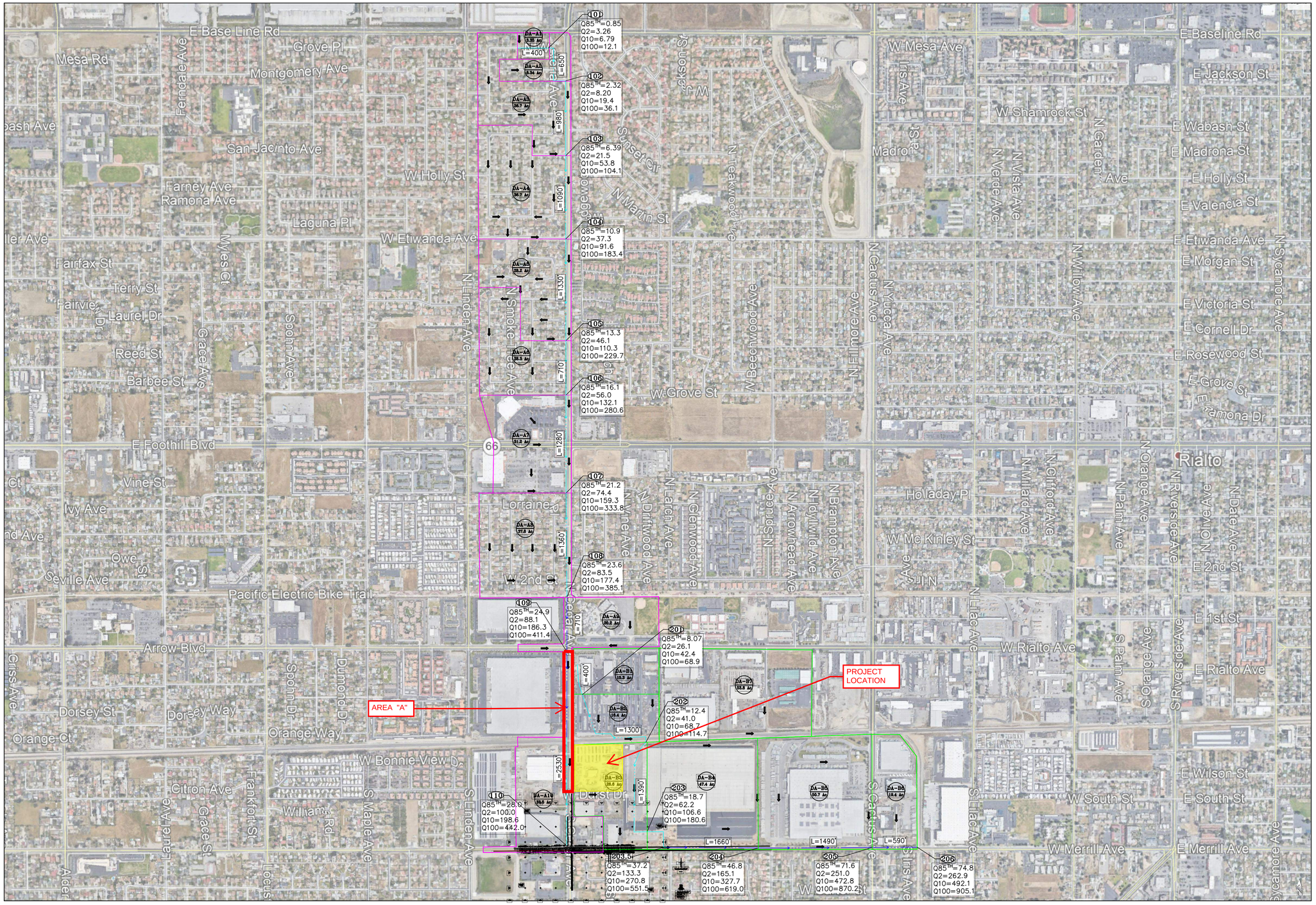
DESIGNED: NRK
CHECKED: dB
DRAWN: NRK
CHECKED: dB
DATE: 10-07-09

CITY OF RIALTO
PUBLIC WORKS DEPARTMENT

CITY OF RIALTO
MASTER PLAN OF DRAINAGE
DRAINAGE MAINLINE & LATERAL MAP

SHEET: 2 OF 2
PROJECT NO.
SCALE: 1" = 1000'
REVISION:

PROJECT NO. 210-3544 PLAN NO. W-3544



LEGEND

- NO. — HYDROLOGY MODEL NODE NUMBER
- A–1 / 3.98 — TRIBUTARY AREA IN ACRES
- 656' — LENGTH OF FLOW
- DRAINAGE BOUNDARY A
- DRAINAGE BOUNDARY B
- PIPE FLOW LINE
- STREET FLOW LINE
- FLOW DIRECTION

N

600 0 300 600 1200

SCALE 1"= 600'

FOR CITY USE ONLY \\hzontario\disk2\proj\R3134641.01 - Rialto - Cedar at Merrill SD Improvement\05 Design\05.1 DWG's\Hydrology\Prelim DA.dwg, Layout: 24x36 DWF (2), Sep 10 2021 3:14pm

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CALL:TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

MARK	REVISIONS

DESIGNED BY: HZ DRAWN BY: HZ CHECKED BY: RC

SEAL-DESIGN ENGINEER

DEPT.	INIT.	DATE

PREPARED UNDER THE SUPERVISION OF:
REMI CANDAELE, RCE XXXXX, EXP. XX/XX/XX DATE
RECOMMENDED FOR APPROVAL BY:
XXX DATE
APPROVED BY:
XXX DATE

HUITT-ZOLLARS
Huitt-Zollars, Inc. Ontario
3990 CONCOURS, #330 * ONTARIO, CALIFORNIA 91761 * (909) 941-7799

BENCH MARK: B.M. No. 63 ELEVATION= 1178.15'
DESCRIPTION:
CITY OF RIALTO BENCH MARK NO. 63 RIVERSIDE AND MERRILL INTERSECTION ON F.H. AT THE N.E. CORNER.

CITY OF RIALTO
CEDAR AT MERRILL SD FEASIBILITY STUDY
XXX

DRAINAGE EXHIBIT

FOR:

OF ____ SHEETS

PLAN No. ____

Durst Drive Warehouse

NOISE IMPACT ANALYSIS

CITY OF RIALTO

PREPARED BY:

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JANUARY 18, 2022

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
INCE	Institute of Noise Control Engineering
L_{eq}	Equivalent continuous (average) sound level
L_{max}	Maximum level measured over the time interval
L_{min}	Minimum level measured over the time interval
mph	Miles per hour
OPR	Office of Planning and Research
PPV	Peak particle velocity
Project	Durst Drive Warehouse
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
VdB	Vibration Decibels

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EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the potential noise impacts and the necessary noise mitigation measures, if any, for Durst Drive Warehouse development ("Project"). The Project is proposed to consist of a single 201,239 square foot warehouse building. However, this noise analysis was performed on an earlier version of the site plan that included a larger building floor area than what is currently proposed, and therefore, the analysis overstates the Project's impacts. This study has been prepared to satisfy applicable City of Rialto standards and thresholds of significance based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

The results of this Durst Drive Warehouse Noise Impact Analysis are summarized below based on the significance criteria in Section 4 of this report. Table ES-1 shows the findings of significance for each potential noise and/or vibration impact under CEQA before and after any required mitigation measures.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Off-Site Traffic Noise	7	*Less Than Significant*	-
Operational Noise	9	*Less Than Significant*	-
Construction Noise	10	*Less Than Significant*	-
Construction Vibration		*Less Than Significant*	-
Concrete Pour Noise		*Less Than Significant*	-

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1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Durst Drive Warehouse ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, sets out the local regulatory setting, presents the study methods and procedures for transportation related CNEL traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term stationary-source operational noise and short-term construction noise and vibration impacts.

1.1 SITE LOCATION

The Durst Drive Warehouse Project is located at 1230 West Durst Drive in the City of Rialto, as shown on Exhibit 1-A. The nearest sensitive residential land use is located south of the project site.

1.2 PROJECT DESCRIPTION

The Project is proposed to consist of a single 201,239 square foot warehouse building which includes APNs 1280-622-5, -6, and -7. However, this noise analysis was performed on an earlier version of the site plan that included a larger building floor area than what is currently proposed, and therefore, the analysis overstates the Project's impacts. It is anticipated that the Project would be developed in a single phase with an anticipated Opening Year of 2023. The on-site Project-related noise sources are expected to include: loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements.

EXHIBIT 1-A: LOCATION MAP

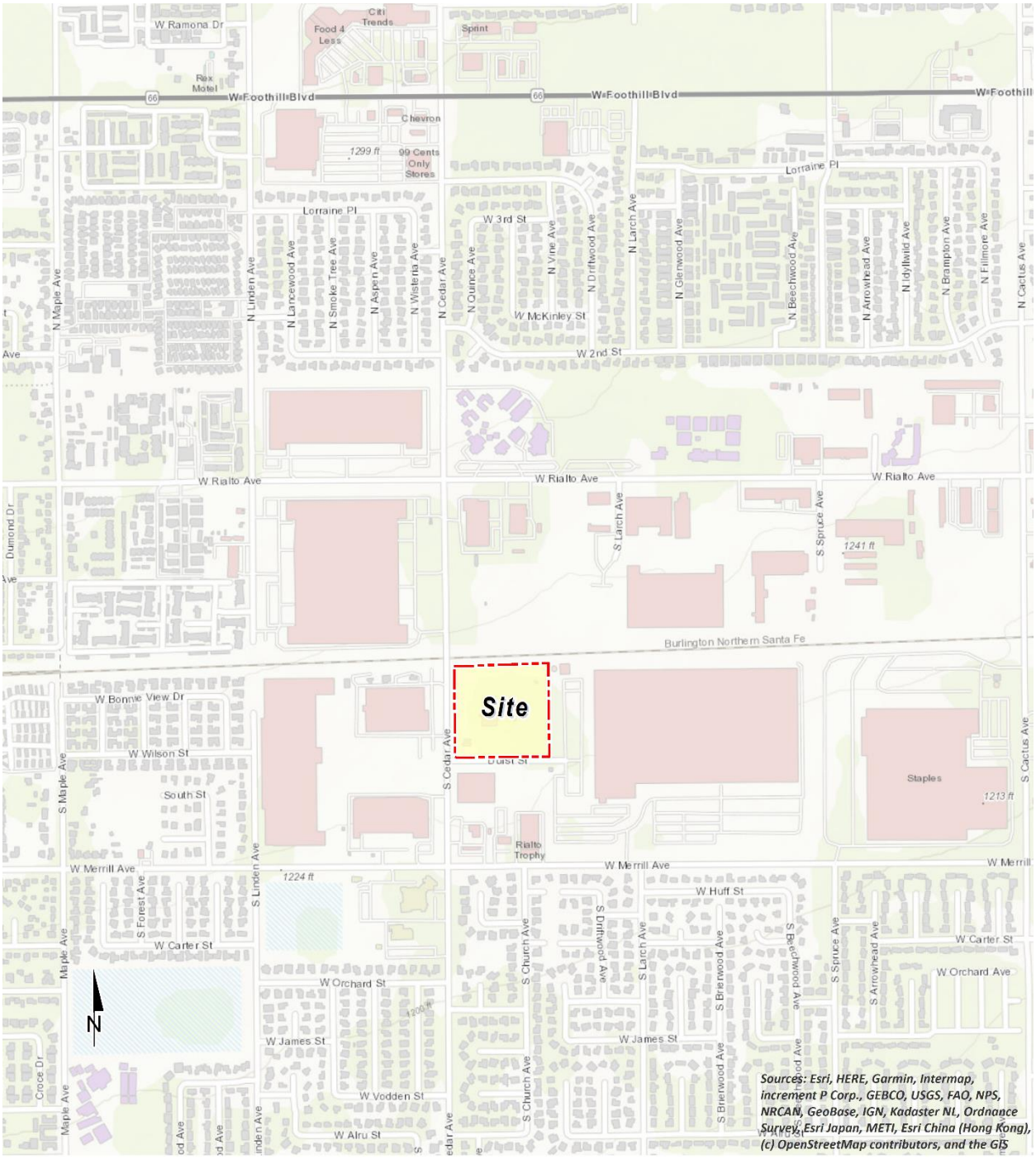
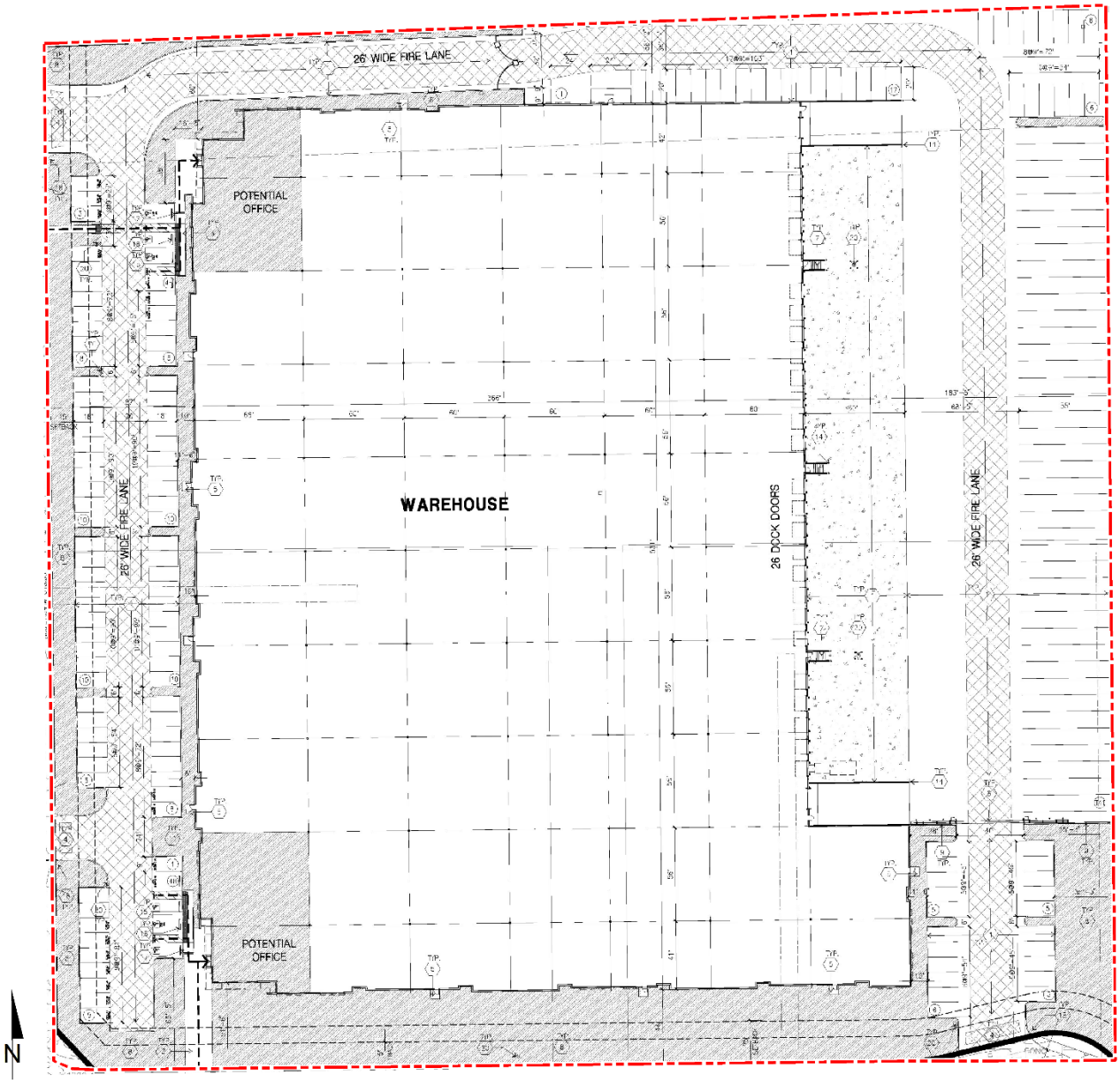


EXHIBIT 1-B: SITE PLAN



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2 FUNDAMENTALS

Noise is simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. Exhibit 2-A presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

EXHIBIT 2-A: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP DISTURBANCE
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

Source: Environmental Protection Agency Office of Noise Abatement and Control, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA/ONAC 550/9-74-004) March 1974.

2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (2) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA

at approximately 1,000 feet, which can cause serious discomfort. (3) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 NOISE DESCRIPTORS

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most used metric is the equivalent level (L_{eq}). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the "average" noise levels within the environment.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time-of-day corrections require the addition of 5 decibels to dBA L_{eq} sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA L_{eq} sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when noise can become more intrusive. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of Rialto relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources.

2.3 SOUND PROPAGATION

When sound propagates over a distance, it changes in level and frequency content. The way noise reduces with distance depends on the following factors.

2.3.1 GEOMETRIC SPREADING

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (2)

2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually

sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (4)

2.3.3 ATMOSPHERIC EFFECTS

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (2)

2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an "out of sight, out of mind" effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby residents. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of-sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The Federal Highway Administration (FHWA) does not consider the planting of vegetation to be a noise abatement measure. (5)

2.4 NOISE CONTROL

Noise control is the process of obtaining an acceptable noise environment for an observation point or receiver by controlling the noise source, transmission path, receiver, or all three. This concept is known as the source-path-receiver concept. In general, noise control measures can be applied to these three elements.

2.5 NOISE BARRIER ATTENUATION

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receiver. Noise barriers, however, do have limitations. For a noise barrier to work, it must block the line-of-sight path of sound from the noise source.

2.6 LAND USE COMPATIBILITY WITH NOISE

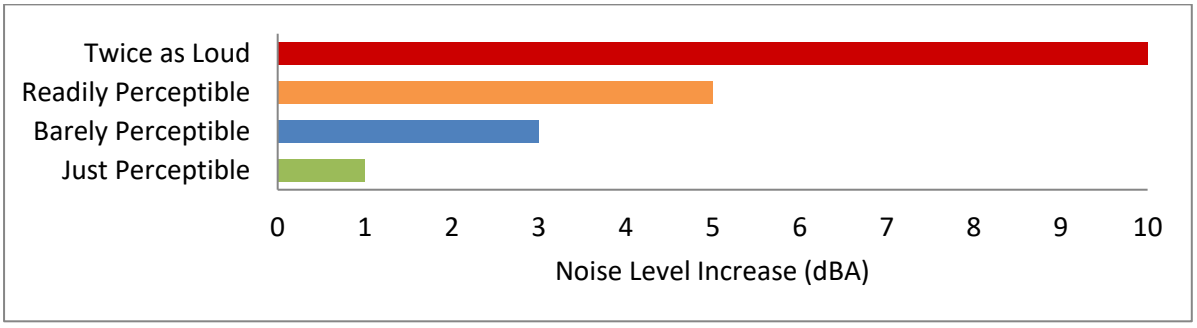
Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (6)

2.7 COMMUNITY RESPONSE TO NOISE

Approximately sixteen percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints may occur. Twenty to thirty percent of the population will not complain even in very severe noise environments. (7 pp. 8-6) Thus, a variety of reactions can be expected from people exposed to any given noise environment.

Surveys have shown that community response to noise varies from no reaction to vigorous action for newly introduced noises averaging from 10 dB below existing to 25 dB above existing. (8) According to research originally published in the Noise Effects Handbook (7), the percentage of high annoyance ranges from approximately 0 percent at 45 dB or less, 10 percent are highly annoyed around 60 dB, and increases rapidly to approximately 70 percent being highly annoyed at approximately 85 dB or greater. Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. A change of 3 dBA is considered barely perceptible, and changes of 5 dBA are considered readily perceptible. (4)

EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION



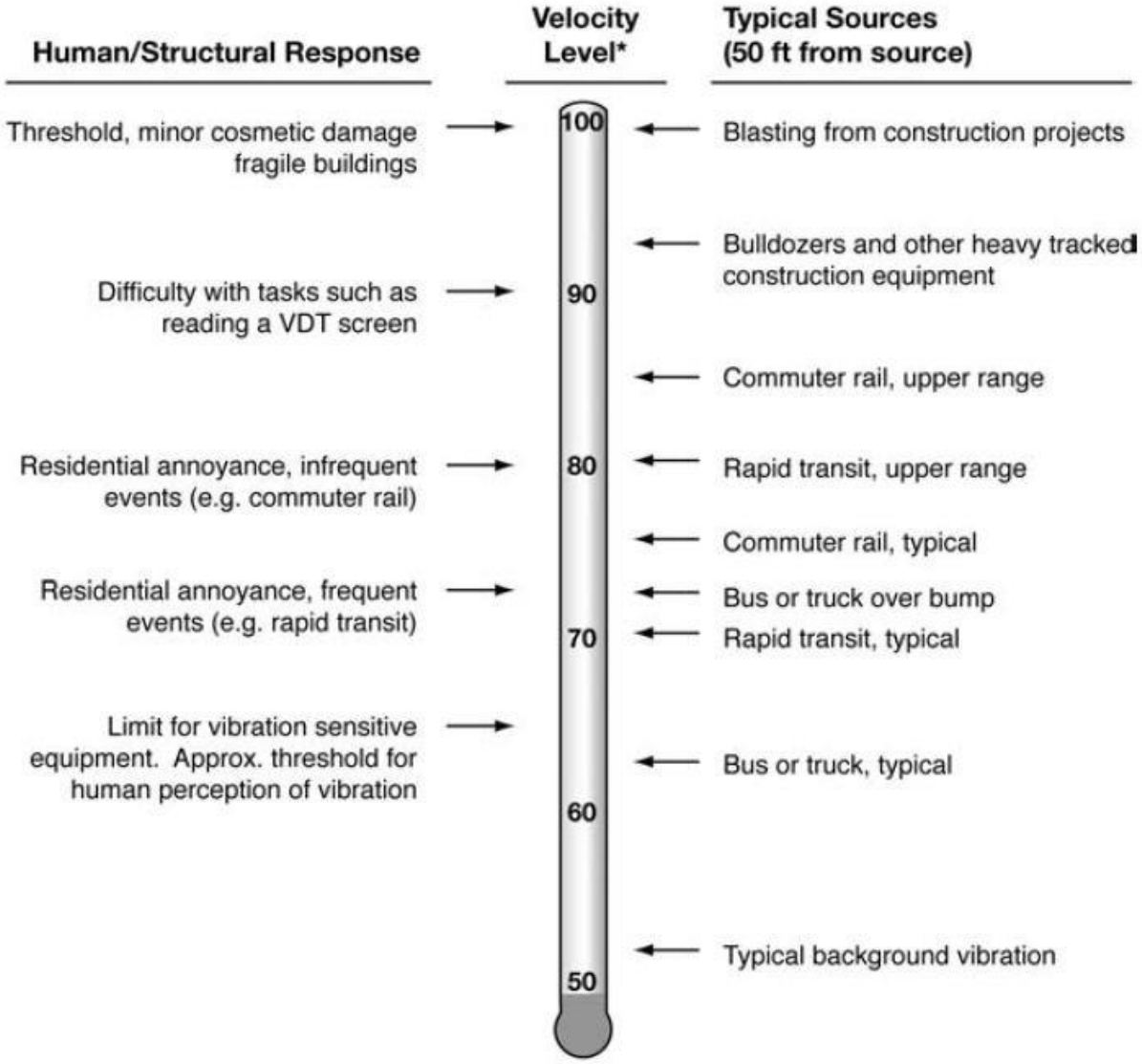
2.8 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Impact Assessment Manual* (8) , vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS. Decibel notation (VdB) serves to reduce the range of numbers used to describe human response to vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receivers for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment and/or activities.

The background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Exhibit 2-C illustrates common vibration sources and the human and structural response to ground-borne vibration.

EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION



** RMS Vibration Velocity Level in VdB relative to 10^{-6} inches/second*

Source: Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual.

3 REGULATORY SETTING

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research (OPR). (9) The purpose of the Noise and safety Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

3.2 CITY OF RIALTO GENERAL PLAN SAFETY & NOISE ELEMENT

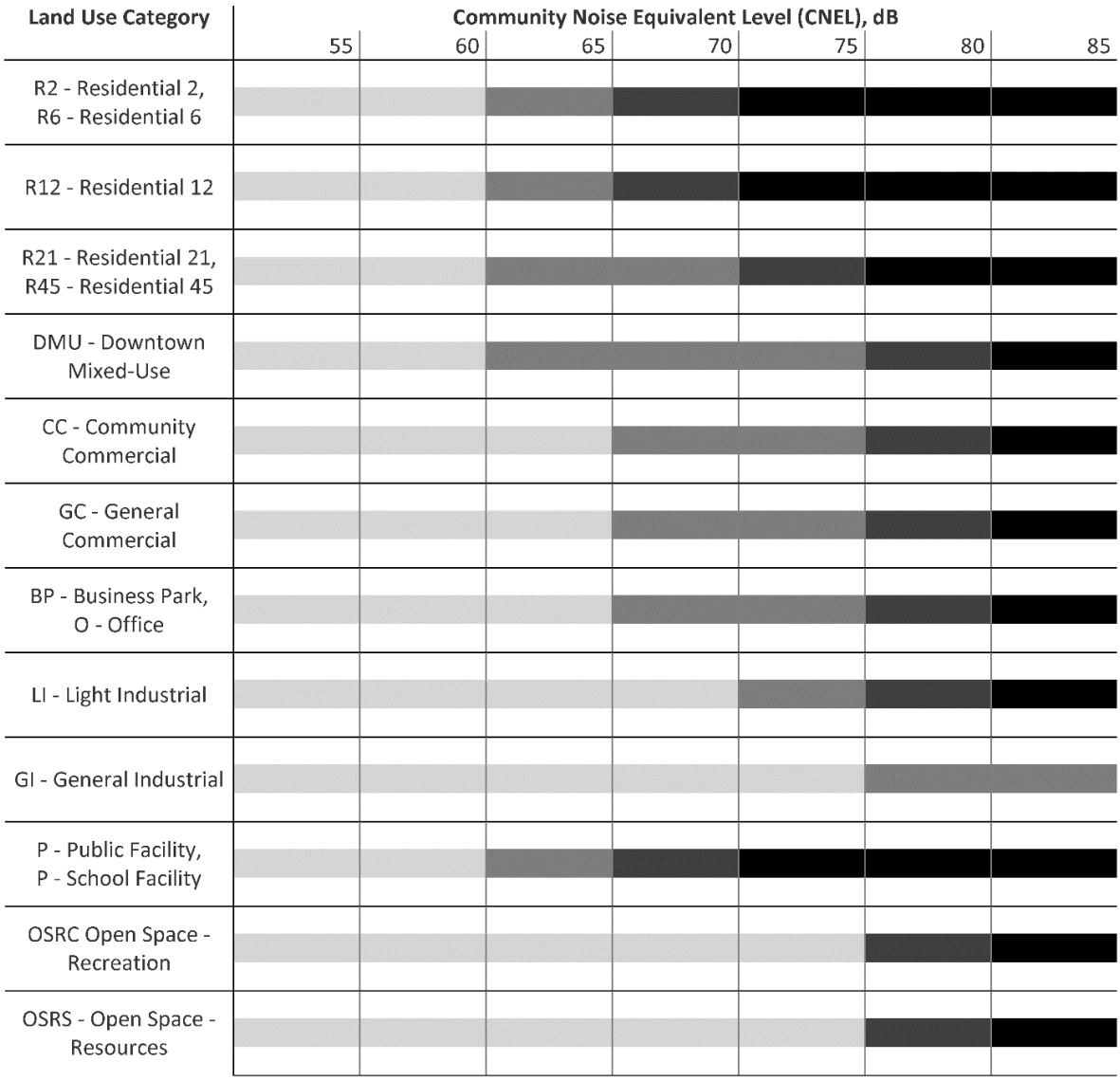
The City of Rialto *General Plan Safety & Noise Element* establishes policies to guard against the creation of any new noise and land use conflicts, and to minimize the impact of existing noise sources on the community. (10) The *Noise Element* does not contain specific transportation-related noise standards, however, it does provide land use compatibility guidelines for future development and the future noise contour boundaries for major roadways in the City of Rialto.

LAND USE COMPATIBILITY

The noise criteria identified in the City of Rialto Safety & Noise Element (Exhibit 5.5) are guidelines to evaluate the land use compatibility of transportation-related noise. The compatibility criteria, shown on Exhibit 3-A, provides the City of Rialto with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels.

The *Rialto Noise Guidelines for Land Use Planning* matrix indicates that industrial land uses, such as the Project site, are considered *normally acceptable* with exterior noise levels below 70 dBA CNEL, and *conditionally acceptable* with noise levels below 75 dBA CNEL. Noise-sensitive residential land uses are considered *normally acceptable* with exterior noise levels below 60 dBA CNEL, and *conditionally acceptable* with noise levels below 65 dBA CNEL. For *conditionally acceptable* land uses, *new development should be undertaken only after detailed analysis of noise reduction requirements are made.* (10)

EXHIBIT 3-A: RIALTO NOISE GUIDELINES FOR LAND USE PLANNING



Source: City of Rialto General Plan Safety & Noise Element, Exhibit 5.5.

3.3 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Durst Drive Warehouse Project, stationary-source (operational) noise such as the expected loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements are typically evaluated against standards established under a jurisdiction's Municipal Code. Section 9.50.050[B] of the City Rialto Municipal Code included in Appendix 3.1 restricts loading/unloading, the use of dollies, carts, forklifts, or wheeled equipment that causes any unnecessary noise within one thousand feet of a residence between the hours of 8:00 p.m. and 7:00 a.m. However, the City of Rialto Municipal Code does not identify specific exterior noise level standards (11). Therefore, the County of San Bernardino Development Code standards are used in this noise study to assess the potential impacts at adjacent sensitive receiver locations consistent with Section 9.50.050[B] of the City Rialto Municipal Code. The operational noise level standards used in this noise study are summarized on Table 3-1.

The San Bernardino County Code, Title 8 Development Code, Section 83.01.080(c) establishes the noise level standards for stationary noise sources. Since the Project's industrial land use will potentially impact adjacent noise-sensitive uses in the Project study area, this noise study relies on the more conservative residential noise level standards to describe potential operational noise impacts. For residential properties, the exterior noise level shall not exceed 55 dBA L_{eq} during the daytime hours (7:00 a.m. to 10:00 p.m.) and 45 dBA L_{eq} during the nighttime hours (10:00 p.m. to 7:00 a.m.) for both the whole hour, and for not more than 30 minutes in any hour. (12)

The exterior noise level standards shall apply for a cumulative period of 30 minutes in any hour, as well as the standard plus 5 dBA cannot be exceeded for a cumulative period of more than 15 minutes in any hour, or the standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour, or the standard plus 15 dBA for a cumulative period of more than 1 minute in any hour, or the standard plus 20 dBA for any period of time. Further, Section 83.01.080(e) indicates that if the existing ambient noise level already exceeds any of the exterior noise level limit categories, then the standard shall be adjusted to reflect the ambient conditions. The County of San Bernardino operational noise level standards are shown on Table 3-1 and included in Appendix 3.2.

TABLE 3-1: OPERATIONAL NOISE LEVEL STANDARDS

Time Period	Exterior Noise Level Standards (dBA)[1]				
	L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_2 (1 min)	L_{max} (Anytime)
Daytime (7:00 a.m. to 10:00 p.m.)	55	60	65	70	75
Nighttime (10:00 p.m. to 7:00 a.m.)	45	50	55	60	65

[1] County of San Bernardino Development Code, Title 8, Section 83.01.080 (Appendix 3.1). The percent noise level is the level exceeded "n" percent of the time during the measurement period. L_{50} is the noise level exceeded 50% of the time. .

The percentile noise descriptors are provided to ensure that the duration of the noise source is fully considered. However, due to the relatively constant intensity of the Project operational activities, the L_{50} or average L_{eq} noise level metrics best describe the loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements. In addition, the L_{eq} noise level metric accounts for noise fluctuations over time by averaging the louder and quieter events and giving more weight to the louder events. In addition, due to the mathematical relationship between the median (L_{50}) and the mean (L_{eq}), the L_{eq} will always be larger than or equal to the L_{50}. The more variable the noise becomes, the larger the L_{eq} becomes in comparison to the L_{50}. Therefore, this noise study conservatively relies on the average L_{eq} sound level limits to describe the Project operational noise levels.

3.4 CONSTRUCTION NOISE STANDARDS

Section 9.50.050[F] of the City Rialto Municipal Code included in Appendix 3.1 restricts the use pile driver, steam or gasoline shovel, pneumatic hammer, steam or electric hoist or other similar devices and 9.50.050[G] electrically operated compressor, fan or other similar devices between the hours of 8:00 p.m. and 7:00 a.m. In addition, Section 9.50.070 of the City of Rialto Municipal Code, states that construction activities are permitted between the hours of 7:00 a.m. to 5:30 p.m. Monday through Friday from October 1st to April 30th, 6:00 a.m. to 7:00 p.m. Monday through Friday from May 1st to September 30th, and 8:00 a.m. to 5:00 p.m. on Saturdays any time of year; with no activity allowed on Sundays or state holidays. (11) While the City establishes limits to the hours during which construction activity may take place, neither the City of Rialto or County of San Bernardino General Plans or Municipal Codes establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a *substantial temporary or periodic noise increase*. Therefore, a numerical construction threshold based on Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* is used for analysis of daytime construction impacts, as discussed below.

According to the FTA, local noise ordinances are typically not very useful in evaluating construction noise. They usually relate to nuisance and hours of allowed activity, and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the impact of a construction project. Project construction noise criteria should account for the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use. Due to the lack of standardized construction noise thresholds, the FTA provides guidelines that can be considered reasonable criteria for construction noise assessment. The FTA considers a daytime exterior construction noise level of 80 dBA L_{eq} as a reasonable threshold for noise sensitive residential land use with a nighttime exterior construction noise level of 70 dBA L_{eq} (8 p. 179).

3.5 CONSTRUCTION VIBRATION STANDARDS

To analyze vibration impacts originating from the operation and construction of the Durst Drive Warehouse, vibration-generating activities are typically evaluated against standards established under a jurisdiction's Municipal Code. Since the City of Rialto Municipal Code does not identify specific vibration level standards, the County Development Code vibration level standards are used in this analysis to assess potential impacts at nearby sensitive receiver locations.

The County Development Code, Section 83.01.090(a) states that vibration shall be no *greater than or equal to two-tenths inches per second measured at or beyond the lot line*. (12) Therefore, to determine if the vibration levels due to the operation and construction of the Project, the peak particle velocity (PPV) vibration level standard of 0.2 inches per second (in/sec) is used.

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4 SIGNIFICANCE CRITERIA

The following significance criteria are based on currently adopted guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1) For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

B. Generation of excessive ground-borne vibration or ground-borne noise levels?

C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

4.1 NOISE LEVEL INCREASES (THRESHOLD A)

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing baseline ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders the noise impact significant.* (13) This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged.

4.1.1 NOISE-SENSITIVE RECEIVERS

The Federal Interagency Committee on Noise (FICON) (14) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level (L_{eq}).

As previously stated, the approach used in this noise study recognizes *that there is no single noise increase that renders the noise impact significant*, based on a 2008 California Court of Appeal ruling on Gray v. County of Madera. (13) For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the without project noise levels are below 60 dBA. Per the FICON, in areas where the without project noise levels

range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. The FICON guidance provides an established source of criteria to assess the impacts of substantial temporary or permanent increase in baseline ambient noise levels. Based on the FICON criteria, the amount to which a given noise level increase is considered acceptable is reduced when the without Project (baseline) noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or *readily perceptible*, 3 dBA or *barely perceptible*, and 1.5 dBA depending on the underlying without Project noise levels for noise-sensitive uses. These levels of increases and their perceived acceptance are consistent with guidance provided by both the Federal Highway Administration (4 p. 9) and Caltrans (15 p. 2_48).

4.1.2 NON-NOISE-SENSITIVE RECEIVERS

The City of Rialto General Plan Safety & Noise Element, Exhibit 5.5, *Noise guidelines for Land Use Planning* was used to establish the satisfactory noise levels of significance for non-noise-sensitive land uses in the Project study area. As previously shown on Exhibit 3-A, the *normally acceptable* exterior noise levels for non-noise-sensitive land uses are 70 dBA CNEL. Noise levels greater than 70 dBA CNEL are considered *conditionally acceptable* per the *Noise Guidelines for Land Use Planning.* (10)

To determine if Project-related traffic noise level increases are significant at off-site non-noise-sensitive land uses, a *readily perceptible* 5 dBA and *barely perceptible* 3 dBA criteria were used. When the without Project noise levels at the non-noise-sensitive land uses are below the *normally acceptable* 70 dBA CNEL compatibility criteria, a *readily perceptible* 5 dBA or greater noise level increase is considered a significant impact. When the without Project noise levels are greater than the *normally acceptable* 70 dBA CNEL land use compatibility criteria, a *barely perceptible* 3 dBA or greater noise level increase is considered a significant impact since the noise level criteria is already exceeded. The noise level increases used to determine significant impacts for non-noise-sensitive land uses is generally consistent with the FICON noise level increase thresholds for noise-sensitive land uses but instead rely on the City of Rialto General Plan Safety & Noise Element, Exhibit 5.5, *Noise Guidelines for Land Use Planning* 70 dBA CNEL exterior noise level criteria.

4.2 VIBRATION (THRESHOLD B)

As described in Section 3.5, the vibration impacts originating from the construction of the Durst Drive Warehouse are appropriately evaluated against the thresholds of significance outlined in the County of San Bernardino Development Code. Section 83.01.090(a) of the County's Development Code states that vibration shall be no *greater than or equal to two-tenths inches per second measured at or beyond the lot line*. (12) Therefore, to determine if the vibration levels due to the operation and construction of the Project, the peak particle velocity (PPV) vibration level standard of 0.2 inches per second (in/sec) is used.

4.3 CEQA GUIDELINES NOT FURTHER ANALYZED (THRESHOLD C)

CEQA Noise Threshold C applies when there are nearby public and private airports and/or air strips and focuses on land use compatibility of the Project to nearby airports and airstrips. The Project site is not located within two miles of an airport or airstrip. The closest airport is the San Bernardino International Airport located roughly 7.7 miles east of the Project site. As such, the Project site would not be exposed to excessive noise levels from airport operations, and therefore, impacts are considered *less than significant,* and no further noise analysis is conducted in relation to Appendix G to the CEQA Guidelines, Noise Threshold C.

4.4 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-1 shows the significance criteria summary matrix that includes the allowable criteria used to identify potentially significant incremental noise level increases.

TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

Analysis	Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Off-Site	Noise-Sensitive[1]	if ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase	
		if ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase	
		if ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL Project increase	
	Non-Noise Sensitive[1,2]	if ambient is < 70 dBA CNEL	≥ 5 dBA CNEL Project increase	
		if ambient is > 70 dBA CNEL	≥ 3 dBA CNEL Project increase	
Operational	Residential	Exterior Noise Level Limit[3]	55 dBA L_{eq}	45 dBA L_{eq}
	Noise-Sensitive[1]	if ambient is < 60 dBA L_{eq}	≥ 5 dBA L_{eq} Project increase	
		if ambient is 60 - 65 dBA L_{eq}	≥ 3 dBA L_{eq} Project increase	
		if ambient is > 65 dBA L_{eq}	≥ 1.5 dBA L_{eq} Project increase	
Construction	Noise-Sensitive	Noise Level Threshold[4]	80 dBA L_{eq}	70 dBA L_{eq}
		Vibration Level Threshold[5]	0.2 PPV in/sec	n/a

[1] FICON, 1992.
2 The City of Rialto General Plan Safety & Noise Element, Exhibit 5.5.
[3] County of San Bernardino Development Code, Title 8, Section 83.01.080 (Appendix 3.1)
[4] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.
[5] Section 83.01.090(a) of the County of San Bernardino County Code.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m. "n/a" = construction activities are not planned during the nighttime hours; "PPV" = peak particle velocity.

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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at five locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Tuesday, July 13th, 2021. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (16)

5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources*. (2) Further, FTA guidance states, t*hat it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community*. (8)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (8) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby sensitive receiver locations allows for a comparison of the before and after Project noise levels

and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the average or equivalent sound levels (L_{eq}). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location.

TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS

Location[1]	Description	Energy Average Noise Level (dBA L_{eq})[2]	
		Daytime	Nighttime
L1	Located North of the project site near Rialto Middle School at 1262 West Rialto Ave.	64.2	61.0
L2	Located northeast of the Project site near Charlotte N. Werner Elementary School at 1050 West Rialto Ave.	59.3	54.8
L3	Located south of the Project site near single-family residence at 503 South Quince Ave.	67.9	63.6
L4	Located south of the Project site near Calvary Chapel Rialto at 1391 West Merrill Ave.	61.5	56.7
L5	Located west of the Project site near single-family residence at 371 South Ironwood Ave.	56.9	51.6

[1] See Exhibit 5-A for the noise level measurement locations.
[2] Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L_1, L_2, L_5, L_8, L_{25}, L_{50}, L_{90}, L_{95}, and L_{99} percentile noise levels observed during the daytime and nighttime periods.

EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



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6 TRAFFIC NOISE METHODS AND PROCEDURES

The following section outlines the methods and procedures used to estimate and analyze the future traffic noise environment. Consistent with City of Rialto Noise Guidelines for Land Use Planning (see Exhibit 3-A), all transportation related noise levels are presented in terms of the 24-hour CNEL's.

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (17) The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (18) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (19)

6.1.1 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the six off-site study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Rialto and County of San Bernardino General Plans and Circulation Elements, and the posted vehicle speeds. The ADT volumes used in this study area presented on Table 6-2 are based on *Durst Drive Warehouse Traffic Analysis*, prepared by Urban Crossroads, Inc. for the following traffic scenarios. (20)

- Existing 2021 Traffic Conditions
- Existing Plus Project 2021 Traffic Conditions
- Existing Plus Ambient Growth (EA) 2023 Traffic Conditions
- Existing Plus Ambient Growth (EAP) 2023 Plus Project Traffic Conditions
- Existing Plus Ambient Growth Plus Cumulative (EAC) 2023 Traffic Conditions
- Existing Plus Ambient Growth Plus Cumulative (EAPC) 2023 Plus Project Traffic Conditions

The ADT volumes vary for each roadway segment based on the existing traffic volumes and the combination of project traffic distributions. This analysis relies on a comparative evaluation of the off-site traffic noise impacts at the boundary of the right-of-way of the receiving adjacent land use, without and with project ADT traffic volumes from the Project traffic study.

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Classification[1]	Receiving Land Use[2]	Distance from Centerline to Receiving Land Use (Feet)[3]	Vehicle Speed (mph)
1	Cedar Av.	n/o Dwy. 1	Major Highway	Non-Sensitive	60'	45
2	Cedar Av.	n/o Merill Av.	Major Highway	Non-Sensitive	60'	45
3	Cedar Av.	s/o Merill Av.	Major Highway	Sensitive	60'	45
4	Cedar Av.	s/o I-10 EB	Major Highway	Non-Sensitive	52'	40
5	Merill Av.	w/o Cedar Av.	Secondary Highway	Sensitive	44'	45
6	Merill Av.	e/o Cedar Av.	Secondary Highway	Sensitive	44'	45

[1] City of Rialto and County of San Bernardino General Plan Circulation Elements.
[2] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[3] Distance to receiving land use is based upon the right-of-way distances.

To quantify the off-site noise levels, the Project related truck trips were added to the heavy truck category in the FHWA noise prediction model. The addition of the Project related truck trips increases the percentage of heavy trucks in the vehicle mix. This approach recognizes that the FHWA noise prediction model is significantly influenced by the number of heavy trucks in the vehicle mix.

Table 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits. The daily Project truck trip-ends were assigned to the individual off-site study area roadway segments based on the Project truck trip distribution percentages documented in the *Durst Drive Warehouse Traffic Analysis*. Using the Project truck trips in combination with the Project trip distribution, Urban Crossroads, Inc. calculated the number of additional Project truck trips and vehicle mix percentages for each of the study area roadway segments. Table 6-4 shows the traffic flow by vehicle type (vehicle mix) used for all without Project traffic scenarios, and Tables 6-5 to 6-7 show the vehicle mixes used for the with Project traffic scenarios.

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic Volumes[1]					
			Existing (2021)		EAP (2023)		EAPC (2023)	
			Without Project	With Project	Without Project	With Project	Without Project	With Project
1	Cedar Av.	n/o Dwy. 1	27,480	27,648	28,591	28,759	31,395	31,491
2	Cedar Av.	n/o Merill Av.	26,773	26,899	27,854	27,980	30,659	30,774
3	Cedar Av.	s/o Merill Av.	23,344	23,512	24,288	24,456	28,664	28,905
4	Cedar Av.	s/o I-10 EB	31,242	31,326	32,504	32,588	55,548	56,088
5	Merill Av.	w/o Cedar Av.	12,727	12,895	13,241	13,409	14,037	14,047
6	Merill Av.	e/o Cedar Av.	12,741	13,270	13,256	13,785	14,051	14,061

[1] Durst Drive Warehouse Traffic Analysis, Urban Crossroads, Inc.

TABLE 6-3: TIME OF DAY VEHICLE SPLITS

Vehicle Type	Time of Day Splits[1]			Total of Time of Day Splits
	Daytime	Evening	Nighttime	
Autos	77.50%	12.90%	9.60%	100.00%
Medium Trucks	84.80%	4.90%	10.30%	100.00%
Heavy Trucks	86.50%	2.70%	10.80%	100.00%

[1] Typical Southern California vehicle mix. Values rounded to the nearest one-hundredth.
"Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

TABLE 6-4: WITHOUT PROJECT VEHICLE MIX

Classification	Total % Traffic Flow			Total
	Autos	Medium Trucks	Heavy Trucks	
All Segments	96.08%	1.33%	2.59%	100.00%

Based on an existing vehicle count taken at Cedar Avenue and Merill Avenue (Durst Drive Warehouse Traffic Analysis, Urban Crossroads, Inc.). Vehicle mix percentage values rounded to the nearest one-hundredth.

Due to the added Project truck trips, the increase in Project traffic volumes and the distributions of trucks on the study area road segments, the percentage of autos, medium trucks and heavy trucks will vary for each of the traffic scenarios. This explains why the existing and future traffic volumes and vehicle mixes vary between seemingly identical study area roadway segments.

TABLE 6-5: EXISTING (2021) WITH PROJECT VEHICLE MIX

ID	Roadway	Segment	With Project[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Cedar Av.	n/o Dwy. 1	96.79%	2.35%	0.86%	100.00%
2	Cedar Av.	n/o Merill Av.	96.85%	2.35%	0.80%	100.00%
3	Cedar Av.	s/o Merill Av.	96.75%	2.35%	0.90%	100.00%
4	Cedar Av.	s/o I-10 EB	96.92%	2.36%	0.72%	100.00%
5	Merill Av.	w/o Cedar Av.	96.53%	2.34%	1.13%	100.00%
6	Merill Av.	e/o Cedar Av.	95.53%	2.30%	2.17%	100.00%

[1] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-6: EA (2023) WITH PROJECT VEHICLE MIX

ID	Roadway	Segment	With Project[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Cedar Av.	n/o Dwy. 1	96.80%	2.35%	0.85%	100.00%
2	Cedar Av.	n/o Merill Av.	96.85%	2.35%	0.79%	100.00%
3	Cedar Av.	s/o Merill Av.	96.76%	2.35%	0.89%	100.00%
4	Cedar Av.	s/o I-10 EB	96.92%	2.36%	0.72%	100.00%
5	Merill Av.	w/o Cedar Av.	96.55%	2.34%	1.11%	100.00%
6	Merill Av.	e/o Cedar Av.	95.59%	2.30%	2.11%	100.00%

[1] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-7: EAC (2023) WITH PROJECT VEHICLE MIX

ID	Roadway	Segment	With Project[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Cedar Av.	n/o Dwy. 1	97.03%	2.35%	0.62%	100.00%
2	Cedar Av.	n/o Merill Av.	97.03%	2.35%	0.62%	100.00%
3	Cedar Av.	s/o Merill Av.	97.04%	2.34%	0.61%	100.00%
4	Cedar Av.	s/o I-10 EB	96.51%	2.35%	1.15%	100.00%
5	Merill Av.	w/o Cedar Av.	97.02%	2.36%	0.62%	100.00%
6	Merill Av.	e/o Cedar Av.	97.02%	2.36%	0.62%	100.00%

[1] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

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7 OFF-SITE TRAFFIC NOISE ANALYSIS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on the *Durst Drive Warehouse Traffic Analysis* prepared by Urban Crossroads, Inc. (20) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway.

7.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. Tables 7-1 to 7-6 present a summary of the exterior traffic noise levels for each traffic condition. Appendix 7.1 includes the traffic noise level contours worksheets for each traffic condition.

TABLE 7-1: EXISTING WITHOUT PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o Dwy. 1	Non-Sensitive	70.3	62	135	290
2	Cedar Av.	n/o Merill Av.	Non-Sensitive	70.1	61	132	285
3	Cedar Av.	s/o Merill Av.	Sensitive	69.6	56	121	260
4	Cedar Av.	s/o I-10 EB	Non-Sensitive	70.7	58	124	268
5	Merill Av.	w/o Cedar Av.	Sensitive	69.0	RW	81	174
6	Merill Av.	e/o Cedar Av.	Sensitive	69.0	RW	81	174

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-2: EXISTING WITH PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o Dwy. 1	Non-Sensitive	70.5	65	140	302
2	Cedar Av.	n/o Merill Av.	Non-Sensitive	70.4	63	136	294
3	Cedar Av.	s/o Merill Av.	Sensitive	69.9	59	127	273
4	Cedar Av.	s/o I-10 EB	Non-Sensitive	70.8	59	127	273
5	Merill Av.	w/o Cedar Av.	Sensitive	69.5	RW	88	189
6	Merill Av.	e/o Cedar Av.	Sensitive	70.5	RW	102	220

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-3: EA WITHOUT PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o Dwy. 1	Non-Sensitive	70.4	64	138	298
2	Cedar Av.	n/o Merill Av.	Non-Sensitive	70.3	63	136	293
3	Cedar Av.	s/o Merill Av.	Sensitive	69.7	58	124	267
4	Cedar Av.	s/o I-10 EB	Non-Sensitive	70.8	59	128	275
5	Merill Av.	w/o Cedar Av.	Sensitive	69.1	RW	83	179
6	Merill Av.	e/o Cedar Av.	Sensitive	69.1	RW	83	179

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-4: EA WITH PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o Dwy. 1	Non-Sensitive	70.7	67	144	309
2	Cedar Av.	n/o Merill Av.	Non-Sensitive	70.5	65	140	301
3	Cedar Av.	s/o Merill Av.	Sensitive	70.0	60	130	279
4	Cedar Av.	s/o I-10 EB	Non-Sensitive	71.0	60	130	280
5	Merill Av.	w/o Cedar Av.	Sensitive	69.6	RW	90	194
6	Merill Av.	e/o Cedar Av.	Sensitive	70.6	RW	104	224

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-5: EAC WITHOUT PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o Dwy. 1	Non-Sensitive	70.8	68	147	317
2	Cedar Av.	n/o Merill Av.	Non-Sensitive	70.7	67	145	312
3	Cedar Av.	s/o Merill Av.	Sensitive	70.4	64	138	298
4	Cedar Av.	s/o I-10 EB	Non-Sensitive	73.2	85	182	393
5	Merill Av.	w/o Cedar Av.	Sensitive	69.4	RW	86	186
6	Merill Av.	e/o Cedar Av.	Sensitive	69.4	RW	86	186

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-6: EAC WITH PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o Dwy. 1	Non-Sensitive	70.9	68	147	317
2	Cedar Av.	n/o Merill Av.	Non-Sensitive	70.7	67	145	312
3	Cedar Av.	s/o Merill Av.	Sensitive	70.5	64	139	299
4	Cedar Av.	s/o I-10 EB	Non-Sensitive	73.8	93	200	432
5	Merill Av.	w/o Cedar Av.	Sensitive	69.4	RW	86	186
6	Merill Av.	e/o Cedar Av.	Sensitive	69.4	RW	86	186

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

7.2 EXISTING PROJECT TRAFFIC NOISE LEVEL INCREASES

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project has been included in this report for informational purposes and to fully analyze all the existing traffic scenarios identified in the Traffic Analysis prepared by Urban Crossroads, Inc. However, the analysis of existing off-site traffic noise levels plus traffic noise generated by the proposed Project scenario will not actually occur since the Project would not be fully constructed and operational until Year 2023 conditions. Table 7-1 shows the Existing without Project conditions CNEL noise levels. The Existing without Project exterior noise levels range from 69.0 to 70.7 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows the Existing with Project conditions ranging from 69.5 to 70.8 dBA CNEL. Table 7-7 shows that the Project off-site traffic noise level increases range from 0.1 to 1.5 dBA CNEL on the study area roadway segments. Based on the significance criteria for off-site traffic noise

presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases on receiving land uses due to the Project-related traffic.

7.3 EA TRAFFIC NOISE LEVEL INCREASES

Table 7-3 presents the Existing plus Ambient Growth without Project conditions CNEL noise levels. The Existing plus Ambient Growth without Project exterior noise levels range from 69.1 to 70.8 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-4 shows that the Existing plus Ambient Growth with Project conditions will range from 69.6 to 71.0 dBA CNEL. Table 7-8 shows that the Project off-site traffic noise level increases range from 0.2 to 1.5 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases on receiving land uses due to the Project-related traffic.

7.4 EAC TRAFFIC NOISE LEVEL INCREASES

Table 7-5 presents the EAC without Project conditions CNEL noise levels. The EAC without Project exterior noise levels range from 69.4 to 73.2 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-6 shows that the EAC with Project conditions will range from 69.4 to 73.8 dBA CNEL. Table 7-9 shows that the Project off-site traffic noise level increases range from 0.0 to 0.6 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases on receiving land uses due to the Project-related traffic.

TABLE 7-7: EXISTING WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[1]			Incremental Noise Level Increase Threshold[2]	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Cedar Av.	n/o Dwy. 1	Non-Sensitive	70.3	70.5	0.2	3.0	No
2	Cedar Av.	n/o Merill Av.	Non-Sensitive	70.1	70.4	0.3	3.0	No
3	Cedar Av.	s/o Merill Av.	Sensitive	69.6	69.9	0.3	1.5	No
4	Cedar Av.	s/o I-10 EB	Non-Sensitive	70.7	70.8	0.1	3.0	No
5	Merill Av.	w/o Cedar Av.	Sensitive	69.0	69.5	0.5	1.5	No
6	Merill Av.	e/o Cedar Av.	Sensitive	69.0	70.5	1.5	1.5	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

TABLE 7-8: EA WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[1]			Incremental Noise Level Increase Threshold[2]	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Cedar Av.	n/o Dwy. 1	Non-Sensitive	70.4	70.7	0.3	3.0	No
2	Cedar Av.	n/o Merill Av.	Non-Sensitive	70.3	70.5	0.2	3.0	No
3	Cedar Av.	s/o Merill Av.	Sensitive	69.7	70.0	0.3	1.5	No
4	Cedar Av.	s/o I-10 EB	Non-Sensitive	70.8	71.0	0.2	3.0	No
5	Merill Av.	w/o Cedar Av.	Sensitive	69.1	69.6	0.5	1.5	No
6	Merill Av.	e/o Cedar Av.	Sensitive	69.1	70.6	1.5	1.5	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

TABLE 7-9: EAC WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[1]			Incremental Noise Level Increase Threshold[2]	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Cedar Av.	n/o Dwy. 1	Non-Sensitive	70.8	70.9	0.1	3.0	No
2	Cedar Av.	n/o Merill Av.	Non-Sensitive	70.7	70.7	0.0	3.0	No
3	Cedar Av.	s/o Merill Av.	Sensitive	70.4	70.5	0.1	1.5	No
4	Cedar Av.	s/o I-10 EB	Non-Sensitive	73.2	73.8	0.6	3.0	No
5	Merill Av.	w/o Cedar Av.	Sensitive	69.4	69.4	0.0	1.5	No
6	Merill Av.	e/o Cedar Av.	Sensitive	69.4	69.4	0.0	1.5	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

8 SENSITIVE RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following sensitive receiver locations, as shown on Exhibit 8-A, were identified as representative locations for analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

To describe the potential off-site Project noise levels, five receiver locations in the vicinity of the Project site were identified. All distances are measured from the Project site boundary to the outdoor living areas (e.g., private backyards) or at the building façade, whichever is closer to the Project site. The selection of receiver locations is based on FHWA guidelines and is consistent with additional guidance provided by Caltrans and the FTA, as previously described in Section 5.2. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. Distance is measured in a straight line from the project boundary to each receiver location.

R1: Location R1 represents the existing noise sensitive Rialto Middle School at 1262 West Rialto Avenue, approximately 1,445 feet north of the Project site. R1 is placed at the school's nearest building façade to the site. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.

R2: Location R2 represents the existing noise sensitive Charlotte N. Werner Elementary School at 1050 West Rialto Ave, approximately 1,566 feet northeast of the Project site. R2 is placed at the school's nearest building façade to the site. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.

R3: Location R3 represents the existing noise sensitive residence at 502 Church Ave, approximately 802 feet south of the Project site. R3 is placed in the private outdoor living areas (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.

R4: Location R4 represents the existing noise sensitive Calvary Chapel Rialto at 1391 West Merrill Avenue, approximately 842 feet southwest of the Project site. R4 is placed at the Church's building façade toward the site. A 24-hour noise measurement near this location, L4, is used to describe the existing ambient noise environment.

R5: Location R5 represents the existing noise sensitive residence at 351 South Ironwood Avenue, approximately 1,420 feet west of the Project site. R5 is placed in the private

outdoor living areas (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.

EXHIBIT 8-A: SENSITIVE RECEIVER LOCATIONS



9 OPERATIONAL NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts at the nearest receiver locations, identified in Section 8, resulting from the operation of the proposed Durst Drive Warehouse Project. Exhibit 9-A identifies the noise source locations used to assess the operational noise levels.

9.1 OPERATIONAL NOISE SOURCES

This operational noise analysis is intended to describe noise level impacts associated with the typical daytime and nighttime activities at the Project site. The on-site Project-related noise sources are expected to include: loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements.

9.2 REFERENCE NOISE LEVELS

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 9-1 used to estimate the Project operational noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements all operating at the same time. These sources of noise activity will likely vary throughout the day.

9.2.1 MEASUREMENT PROCEDURES

The reference noise level measurements presented in this section were collected using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (16)

EXHIBIT 9-A: OPERATIONAL NOISE SOURCE LOCATIONS

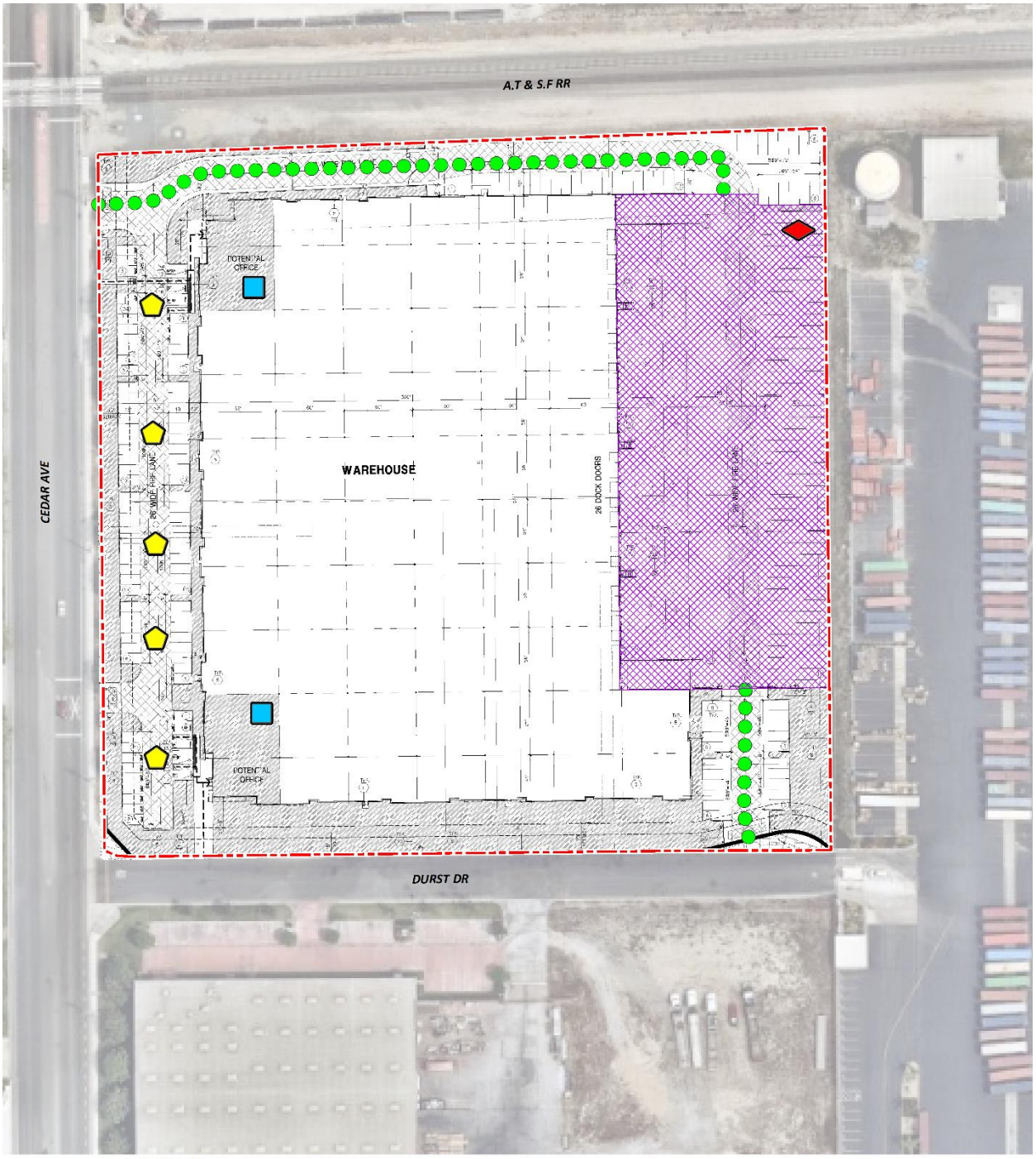

TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS

Noise Source[1]	Noise Source Height (Feet)	Min./ Hour[2]		Reference Noise Level (dBA L_{eq}) @ 50 Feet	Sound Power Level (dBA)[3]
		Day	Night		
Loading Dock Activity	8'	60	60	65.7	111.5
Roof-Top Air Conditioning Units	5'	39	28	57.2	88.9
Trash Enclosure Activity	5'	10	10	57.3	89.0
Parking Lot Vehicle Movements	5'	60	60	56.1	87.8
Truck Movements	8'	60	60	58.0	93.2

[1] As measured by Urban Crossroads, Inc.
[2] Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site. "Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.
[3] Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calculated using the CadnaA noise model at the reference distance to the noise source.

9.2.2 LOADING DOCK ACTIVITY

The reference loading dock activities are intended to describe the typical outdoor operational noise activities associated with the Project. This includes truck idling, reefer activity (refrigerator truck/cold storage), deliveries, backup alarms, trailer docking including a combination of tractor trailer semi-trucks, two-axle delivery trucks, and background operation activities. Since the noise levels generated by cold storage loading dock activity can be slightly higher due to the use of refrigerated trucks or reefers.

The reference noise level measurement was taken in the center of the loading dock activity area and represents multiple concurrent noise sources resulting in a combined noise level of 65.7 dBA L_{eq} at a uniform distance of 50 feet. Specifically, the reference noise level measurement represents one truck located approximately 30 feet from the noise level meter with another truck passing by to park roughly 20 feet away, both with their engines idling. Throughout the reference noise level measurement, a separate docked and running reefer truck was located approximately 50 feet east of the measurement location. Additional background noise sources included truck pass-by noise, truck drivers talking to each other next to docked trucks, and air brake release noise when trucks parked.

9.2.3 ROOF-TOP AIR CONDITIONING UNITS

The noise level measurements describe a single mechanical roof-top air conditioning unit. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit. At the uniform reference distance of 50 feet, the reference noise levels are 57.2 dBA L_{eq}. Based on the typical operating conditions observed over a four-day measurement period, the roof-top air conditioning units are estimated to operate for and average 39 minutes per hour during the daytime hours, and 28 minutes per hour during the nighttime hours. These operating conditions reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. For this noise analysis, the air conditioning units are expected to be located on the roof of the Project buildings.

9.2.4 TRASH ENCLOSURE ACTIVITY

To describe the noise levels associated with a trash enclosure activity, Urban Crossroads collected a reference noise level measurement at an existing trash enclosure containing two dumpster bins. The trash enclosure noise levels describe metal gates opening and closing, metal scraping against concrete floor sounds, dumpster movement on metal wheels, and trash dropping into the metal dumpster. The reference noise levels describe trash enclosure noise activities when trash is dropped into an empty metal dumpster, as would occur at the Project Site. The measured reference noise level at the uniform 50-foot reference distance is 57.3 dBA L_{eq} for the trash enclosure activity. The reference noise level describes the expected noise source activities associated with the trash enclosures for the Project's proposed building. Typical trash enclosure activities are estimated to occur for 10 minutes per hour.

9.2.5 PARKING LOT VEHICLE MOVEMENTS

To describe the on-site parking lot activity, a long-term 29-hour reference noise level measurement was collected in the center of activity within the staff parking lot of a warehouse distribution center. At 50 feet from the center of activity, the parking lot produced a reference noise level of 56.1 dBA L_{eq}. Parking activities are expected to take place during the full hour (60 minutes) throughout the daytime and evening hours. The parking lot noise levels are mainly due cars pulling in and out of parking spaces in combination with car doors opening and closing.

9.2.6 TRUCK MOVEMENTS

The truck movements reference noise level measurement was collected over a period of 1 hour and 28 minutes and represents multiple heavy trucks entering and exiting the outdoor loading dock area producing a reference noise level of 59.8 dBA L_{eq} at 50 feet. The noise sources included at this measurement location account for trucks entering and existing the Project driveways and maneuvering in and out of the outdoor loading dock activity area.

9.3 CADNAA NOISE PREDICTION MODEL

To fully describe the exterior operational noise levels from the Project, Urban Crossroads, Inc. developed a noise prediction model using the CadnaA (Computer Aided Noise Abatement) computer program. CadnaA can analyze multiple types of noise sources using the spatially accurate Project site plan, georeferenced Nearmap aerial imagery, topography, buildings, and barriers in its calculations to predict outdoor noise levels.

Using the ISO 9613-2 protocol, CadnaA will calculate the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a summary of noise level at each receiver and the partial noise level contributions by noise source. Consistent with the ISO 9613-2 protocol, the CadnaA noise prediction model relies on the reference sound power level (L_w) to describe individual noise sources. While sound pressure levels (e.g., L_{eq}) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (L_w) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and

other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment.

The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the CadnaA noise analysis to account for mixed ground representing a combination of hard and soft surfaces. Appendix 9.1 includes the detailed noise model inputs used to estimate the Project operational noise levels presented in this section.

9.4 PROJECT OPERATIONAL NOISE LEVELS

Using the reference noise levels to represent the proposed Project operations that include loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receiver locations. Table 9-2 shows the Project operational noise levels during the daytime hours of 7:00 a.m. to 10:00 p.m. The daytime hourly noise levels at the off-site receiver locations are expected to range from 32.1 to 45.3 dBA L_{eq}.

TABLE 9-2: DAYTIME PROJECT OPERATIONAL NOISE LEVELS

Noise Source[1]	Operational Noise Levels by Receiver Location (dBA Leq)				
	R1	R2	R3	R4	R5
Loading Dock Activity	44.8	45.2	42.8	25.6	33.9
Roof-Top Air Conditioning Units	19.5	17.7	23.6	21.8	23.5
Trash Enclosure Activity	14.5	14.1	5.3	0.0	0.9
Parking Lot Vehicle Movements	27.0	10.4	30.5	28.7	31.4
Truck Movements	30.7	29.5	33.1	25.5	30.8
Total (All Noise Sources)	**45.1**	**45.3**	**43.5**	**32.1**	**37.2**

[1] See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

Tables 9-3 shows the Project operational noise levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. The nighttime hourly noise levels at the off-site receiver locations are expected to range from 31.0 to 44.3 dBA L_{eq}. The differences between the daytime and nighttime noise levels are largely related to the estimated duration of noise activity as outlined in Table 9-1 and Appendix 9.1.

TABLE 9-3: NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS

Noise Source[1]	Operational Noise Levels by Receiver Location (dBA Leq)				
	R1	R2	R3	R4	R5
Loading Dock Activity	43.8	44.2	41.8	24.7	32.9
Roof-Top Air Conditioning Units	17.1	15.3	21.2	19.4	21.1
Trash Enclosure Activity	13.5	13.1	4.4	0.0	0.0
Parking Lot Vehicle Movements	26.0	9.4	29.5	27.8	30.4
Truck Movements	29.8	28.5	32.2	24.5	29.8
Total (All Noise Sources)	**44.1**	**44.3**	**42.5**	**31.0**	**36.2**

[1] See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

9.5 PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level thresholds based on the County of San Bernardino exterior noise level standards at nearest noise-sensitive receiver locations. Table 9-4 shows the operational noise levels associated with Durst Drive Warehouse Project will satisfy the Section 9.50.050[B] of the City Rialto Municipal Code and the County of San Bernardino exterior noise level standards at the nearest receiver locations. Therefore, the operational noise impacts are considered *less than significant* at the nearest noise-sensitive receiver locations.

TABLE 9-4: OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location[1]	Project Operational Noise Levels (dBA Leq)[2]		Noise Level Standards (dBA Leq)[3]		Noise Level Standards Exceeded?[4]	
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
R1	45.1	44.1	55	45	No	No
R2	45.3	44.3	55	45	No	No
R3	43.5	42.5	55	45	No	No
R4	32.1	31.0	55	45	No	No
R5	37.2	36.2	55	45	No	No

[1] See Exhibit 8-A for the receiver locations.
[2] Proposed Project operational noise levels as shown on Tables 9-2 and 9-3.
[3] Exterior noise level standards, as shown on Table 4-1.
[4] Do the estimated Project operational noise source activities exceed the noise level standards?
"Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

9.6 PROJECT OPERATIONAL NOISE LEVEL INCREASES

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearest receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (2) Instead, they must be logarithmically added using the following base equation:

$$SPL_{Total} = 10\log_{10}[10^{SPL1/10} + 10^{SPL2/10} + \ldots 10^{SPLn/10}]$$

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describes the Project noise level increases to the existing ambient noise environment. As indicated on Tables 9-5 and 9-6, the Project will generate daytime and nighttime operational noise level increases ranging from 0.0 to 0.4 dBA L_{eq} at the nearest receiver locations. Project-related operational noise level increases will satisfy the operational noise level increase significance criteria presented on Table 4-1. Therefore, the incremental Project operational noise level increase is considered *less than significant* at all receiver locations.

TABLE 9-5: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Increase Criteria[7]	Increase Criteria Exceeded?
R1	45.1	L1	64.2	64.3	0.1	5.0	No
R2	45.3	L2	59.3	59.5	0.2	5.0	No
R3	43.5	L3	67.9	67.9	0.0	1.5	No
R4	32.1	L4	61.5	61.5	0.0	5.0	No
R5	37.2	L5	56.9	56.9	0.0	5.0	No

[1] See Exhibit 8-A for the receiver locations.
[2] Total Project daytime operational noise levels as shown on Table 9-2.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed daytime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Significance increase criteria as shown on Table 4-1.

TABLE 9-6: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Increase Criteria[7]	Increase Criteria Exceeded?
R1	44.1	L1	61.0	61.1	0.1	5.0	No
R2	44.3	L2	54.8	55.2	0.4	5.0	No
R3	42.5	L3	63.6	63.6	0.0	5.0	No
R4	31.0	L4	56.7	56.7	0.0	5.0	No
R5	36.2	L5	51.6	51.7	0.1	5.0	No

[1] See Exhibit 8-A for the receiver locations.
[2] Total Project nighttime operational noise levels as shown on Table 9-3.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed nighttime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Significance increase criteria as shown on Table 4-1.

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10 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 10-A shows the construction noise source locations in relation to the nearest sensitive receiver locations previously described in Section 8. According to Section 9.50.050[F] of the City Rialto Municipal Code the use pile driver, steam or gasoline shovel, pneumatic hammer, steam or electric hoist or other similar devices and 9.50.050[G] electrically operated compressor, fan or other similar devices are restricted between the hours of 8:00 p.m. and 7:00 a.m. Section 9.50.070 of the City of Rialto Municipal Code, states that construction activities are permitted between the hours of 7:00 a.m. to 5:30 p.m. Monday through Friday from October 1st to April 30th, 6:00 a.m. to 7:00 p.m. Monday through Friday from May 1st to September 30th, and 8:00 a.m. to 5:00 p.m. on Saturdays any time of year; with no activity allowed on Sundays or state holidays. (11)

In addition, since neither the City of Rialto General Plan or Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers for CEQA analysis purposes, a numerical construction threshold based on Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual is used for analysis of daytime construction impacts. The FTA considers a daytime exterior construction noise level of 80 dBA Leq as a reasonable threshold for noise sensitive residential land use. (8 p. 179)

10.1 CONSTRUCTION NOISE LEVELS

The FTA *Transit Noise and Vibration Impact Assessment Manual* recognizes that construction projects are accomplished in several different stages and outlines the procedures for assessing noise impacts during construction. Each stage has a specific equipment mix, depending on the work to be completed during that stage. As a result of the equipment mix, each stage has its own noise characteristics; some stages have higher continuous noise levels than others, and some have higher impact noise levels than others. The Project construction activities are expected to occur in the following stages:

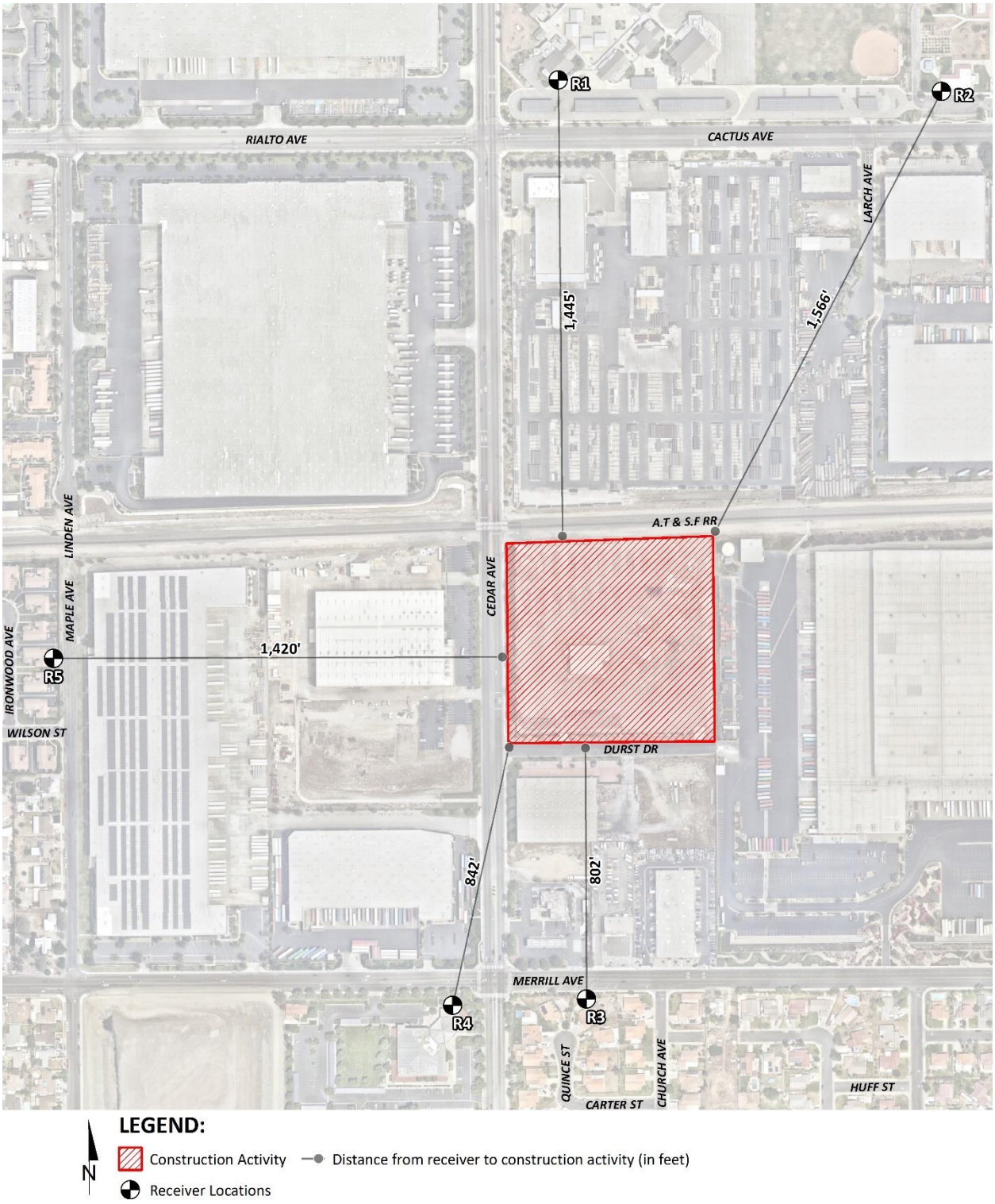
- Demolition
- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

10.2 CONSTRUCTION REFERENCE NOISE LEVELS

To describe construction noise activities, this construction noise analysis was prepared using reference construction equipment noise levels from the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model (RCNM), which includes a national database of construction equipment reference noise emission levels. (21) The RCNM equipment database, provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to

estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.

EXHIBIT 10-A: CONSTRUCTION NOISE SOURCE AND RECEIVER LOCATIONS



10.3 CONSTRUCTION NOISE ANALYSIS

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations were completed. Consistent with FTA guidance for general construction noise assessment, Table 10-1 presents the combined noise levels for the loudest construction equipment, assuming they operate at the same time. As shown on Table 10-2, the construction noise levels are expected to range from 41.0 to 52.5 dBA L_{eq} at the nearby receiver locations. Appendix 10.1 includes the detailed CadnaA construction noise model inputs.

TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

Construction Stage	Reference Construction Activity	Reference Noise Level @ 50 Feet (dBA L_{eq})[1]	Combined Noise Level (dBA L_{eq})[2]	Combined Sound Power Level (PWL)[3]
Demolition	Demolition Equipment	82	83	115
	Backhoes	74		
	Hauling Trucks	72		
Site Preparation	Crawler Tractors	78	80	112
	Hauling Trucks	72		
	Rubber Tired Dozers	75		
Grading	Graders	81	83	115
	Excavators	77		
	Compactors	76		
Building Construction	Cranes	73	81	113
	Tractors	80		
	Welders	70		
Paving	Pavers	74	83	115
	Paving Equipment	82		
	Rollers	73		
Architectural Coating	Cranes	73	77	109
	Air Compressors	74		
	Generator Sets	70		

[1] FHWA Roadway Construction Noise Model (RCNM).
[2] Represents the combined noise level for all equipment assuming they operate at the same time consistent with FTA Transit Noise and Vibration Impact Assessment guidance.
[3] Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calibrated using the CadnaA noise model at the reference distance to the noise source.

TABLE 10-2: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})						
	Demolition	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels[2]
R1	48.2	45.2	48.2	46.2	48.2	42.2	48.2
R2	47.0	44.0	47.0	45.0	47.0	41.0	47.0
R3	52.5	49.5	52.5	50.5	52.5	46.5	52.5
R4	48.3	45.3	48.3	46.3	48.3	42.3	48.3
R5	51.5	48.5	51.5	49.5	51.5	45.5	51.5

[1] Noise receiver locations are shown on Exhibit 10-A.
[2] Construction noise level calculations based on distance from the construction activity, which is measured from the Project site boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 10.1.

10.4 CONSTRUCTION NOISE LEVEL COMPLIANCE

To evaluate whether the Project will generate potentially significant short-term noise levels at nearest receiver locations, a construction-related daytime noise level threshold of 80 dBA L_{eq} is used as a reasonable threshold to assess the daytime construction noise level impacts. The construction noise analysis shows that the nearest receiver locations will satisfy the reasonable daytime 80 dBA L_{eq} significance threshold during Project construction activities as shown on Table 10-3. Therefore, the noise impacts due to Project construction noise are considered *less than significant* at all receiver locations.

TABLE 10-3: CONSTRUCTION NOISE LEVEL COMPLIANCE

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})		
	Highest Construction Noise Levels[2]	Threshold[3]	Threshold Exceeded?[4]
R1	48.2	80	No
R2	47.0	80	No
R3	52.5	80	No
R4	48.3	80	No
R5	51.5	80	No

[1] Noise receiver locations are shown on Exhibit 10-A.
[2] Highest construction noise level calculations based on distance from the construction noise source activity to the nearest receiver locations as shown on Table 10-2.
[3] Construction noise level thresholds as shown on Table 4-1.
[4] Do the estimated Project construction noise levels exceed the construction noise level threshold?

10.5 CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Ground vibration levels associated with various types of construction equipment are summarized on Table 10-4. Based on the representative vibration levels presented for various construction

equipment types, it is possible to estimate the potential for human response (annoyance) and building damage using the following vibration assessment methods defined by the FTA. To describe the vibration impacts the FTA provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

TABLE 10-4: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

Using the vibration source level of construction equipment provided on Table 10-4 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 10-5 presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 802 to 1,566 feet from Project construction activities, construction vibration velocity levels are estimated to be 0.000 in/sec and will remain below the County of San Bernardino 0.2 PPV in/sec threshold for vibration at all receiver locations. Therefore, the Project-related vibration impacts are considered *less than significant* during the construction activities at the Project site.

Further, vibration levels at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating simultaneously adjacent to the Project site perimeter.

TABLE 10-5: PROJECT CONSTRUCTION VIBRATION LEVELS

Receiver[1]	Distance to Const. Activity (Feet)[2]	Typical Construction Vibration Levels PPV (in/sec)[3]					Thresholds PPV (in/sec)[4]	Thresholds Exceeded?[5]
		Small bulldozer	Jackhammer	Loaded Trucks	Large bulldozer	Highest Vibration Level		
R1	1,445'	0.000	0.000	0.000	0.000	0.000	0.2	No
R2	1,566'	0.000	0.000	0.000	0.000	0.000	0.2	No
R3	802'	0.000	0.000	0.000	0.000	0.000	0.2	No
R4	842'	0.000	0.000	0.000	0.000	0.000	0.2	No
R5	1,420'	0.000	0.000	0.000	0.000	0.000	0.2	No

[1] Receiver locations are shown on Exhibit 10-A.
[2] Distance from receiver location to Project construction boundary (Project site boundary).
[3] Based on the Vibration Source Levels of Construction Equipment (Table 10-4).
[4] County of San Bernardino Development Code, Section 83.01.090(a) (Appendix 3.1)
[5] Does the peak vibration exceed the acceptable vibration thresholds?
"PPV" = Peak Particle Velocity

10.6 NIGHTTIME CONCRETE POUR NOISE ANALYSIS

It is our understanding that nighttime concrete pouring activities will occur as a part of Project building construction activities. Nighttime concrete pouring activities are often used to support reduced concrete mixer truck transit times and lower air temperatures than during the daytime hours and are generally limited to the actual building area as shown on Exhibit 10-B. Since the nighttime concrete pours will take place outside the permitted City of Rialto Development Code, Section 9.50.070 hours of 7:00 a.m. to 5:30 p.m. Monday through Friday from October 1st to April 30th, 6:00 a.m. to 7:00 p.m. Monday through Friday from May 1st to September 30th, and 8:00 a.m. to 5:00 p.m. on Saturdays any time of year, the Project Applicant shall be required to obtain authorization for nighttime work from the City of Rialto. Any nighttime construction noise activities shall satisfy the FTA residential 70 dBA L_{eq} noise limit outlined in Table 4-1. The reference concrete pour noise levels are expected to occur during the building construction stage and range from 65 to 72 dBA L_{eq} at 50 feet with a combined noise level of 74 dBA L_{eq} as previously shown on Table 10.1.

As shown on Table 10-6, the noise levels associated with the nighttime concrete pour activities (paving) are estimated to range from 46.8 to 52.5 dBA L_{eq} and will satisfy the FTA 70 dBA L_{eq} nighttime residential noise level threshold at all the receiver locations. Based on the results of this analysis, all nearest noise receiver locations will experience *less than significant* impacts due to the Project related nighttime concrete pour activities. Appendix 10.2 includes the CadnaA nighttime concrete pour noise model inputs.

TABLE 10-6: NIGHTTIME CONCRETE POUR NOISE LEVEL COMPLIANCE

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})		
	Paving Construction[2]	Nighttime Threshold[3]	Threshold Exceeded?[4]
R1	48.2	70	No
R2	46.8	70	No
R3	52.5	70	No
R4	48.5	70	No
R5	51.7	70	No

[1] Noise receiver locations are shown on Exhibit 8-B.
[2] Paving construction noise level calculations based on distance from the construction noise source activity to nearby receiver locations.
[3] Exterior noise level standards as shown on Table 4-1.
[4] Do the estimated Project construction noise levels exceed the nighttime construction noise level threshold?

EXHIBIT 10-B: NIGHTTIME CONCRETE POUR NOISE SOURCE AND RECEIVER LOCATIONS



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11 REFERENCES

1. **State of California.** *California Environmental Quality Act, Appendix G.* 2018.
2. **California Department of Transportation Environmental Program.** *Technical Noise Supplement - A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
3. **Environmental Protection Agency Office of Noise Abatement and Control.** *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* March 1974. EPA/ONAC 550/9/74-004.
4. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch.** *Highway Traffic Noise Analysis and Abatement Policy and Guidance.* December 2011.
5. **U.S. Department of Transportation Federal Highway Administration.** *Highway Noise Barrier Design Handbook.* 2001.
6. **U.S. Department of Transportation, Federal Highway Administration.** *Highway Traffic Noise in the United States, Problem and Response.* April 2000. p. 3.
7. **U.S. Environmental Protection Agency Office of Noise Abatement and Control.** *Noise Effects Handbook-A Desk Reference to Health and Welfare Effects of Noise.* October 1979 (revised July 1981). EPA 550/9/82/106.
8. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment Manual.* September 2018.
9. **Office of Planning and Research.** *State of California General Plan Guidelines.* October 2017.
10. **City of Rialto.** *General Plan Safety & Noise Element.* December 2010.
11. —. *Municipal Code, Chapter 9.50 - Noise Control.*
12. **County of San Bernardino.** *Code of Ordinances, Title 8 Development Code, Chapter 83.01 General Performance Standards.*
13. **California Court of Appeal.** *Gray v. County of Madera, F053661.* 167 Cal.App.4th 1099; - Cal.Rptr.3d, October 2008.
14. **Federal Interagency Committee on Noise.** *Federal Agency Review of Selected Airport Noise Analysis Issues.* August 1992.
15. **California Department of Transportation.** *Technical Noise Supplement.* November 2009.
16. **American National Standards Institute (ANSI).** *Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.*
17. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.
18. **California Department of Transportation Environmental Program, Office of Environmental Engineering.** *Use of California Vehicle Noise Reference Energy Mean Emission Levels (Calveno REMELs) in FHWA Highway Traffic Noise Prediction.* September 1995. TAN 95-03.
19. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
20. **Urban Crossroads.** *Durst Drive Warehouse .* December 2021.

21. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning.** *FHWA Roadway Construction Noise Model.* January, 2006.

22. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment Manual.* September 2018.

12 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Durst Drive Warehouse Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 584-3148.



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EDUCATION

Master of Science in Civil and Environmental Engineering
California Polytechnic State University, San Luis Obispo • December, 1993

Bachelor of Science in City and Regional Planning
California Polytechnic State University, San Luis Obispo • June, 1992

PROFESSIONAL REGISTRATIONS

PE – Registered Professional Traffic Engineer – TR 2537 • January, 2009
AICP – American Institute of Certified Planners – 013011 • June, 1997–January 1, 2012
PTP – Professional Transportation Planner • May, 2007 – May, 2013
INCE – Institute of Noise Control Engineering • March, 2004

PROFESSIONAL AFFILIATIONS

ASA – Acoustical Society of America
ITE – Institute of Transportation Engineers

PROFESSIONAL CERTIFICATIONS

Certified Acoustical Consultant – County of San Diego • March, 2018
Certified Acoustical Consultant – County of Orange • February, 2011
FHWA-NHI-142051 Highway Traffic Noise Certificate of Training • February, 2013

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APPENDIX 3.1:

CITY OF RIALTO MUNICIPAL CODE

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§ 83.01.080 Noise.

This Section establishes standards concerning acceptable noise levels for both noise-sensitive land uses and for noise-generating land uses.

(a) *Noise Measurement.* Noise shall be measured:

(1) At the property line of the nearest site that is occupied by, and/or zoned or designated to allow the development of noise-sensitive land uses;

(2) With a sound level meter that meets the standards of the American National Standards Institute (ANSI § SI4 1979, Type 1 or Type 2);

(3) Using the “A” weighted sound pressure level scale in decibels (ref. pressure = 20 micronewtons per meter squared). The unit of measure shall be designated as dB(A).

(b) *Noise Impacted Areas.* Areas within the County shall be designated as “noise-impacted” if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in Subdivision (d) (Noise Standards for Stationary Noise Sources) and Subdivision (e) (Noise Standards for Adjacent Mobile Noise Sources), below. New development of residential or other noise-sensitive land uses shall not be allowed in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to these standards. Noise-sensitive land uses shall include residential uses, schools, hospitals, nursing homes, religious institutions, libraries, and similar uses.

(c) *Noise Standards for Stationary Noise Sources.*

(1) *Noise Standards.* Table 83-2 (Noise Standards for Stationary Noise Sources) describes the noise standard for emanations from a stationary noise source, as it affects adjacent properties:

Table 83-2

Noise Standards for Stationary Noise Sources

Affected Land Uses (Receiving Noise)	***7:00 a.m. - 10:00 p.m. Leq***	***10:00 p.m. - 7:00 a.m. Leq***
Residential	55 dB(A)	45 dB(A)
Professional Services	55 dB(A)	55 dB(A)
Other Commercial	60 dB(A)	60 dB(A)
Industrial	70 dB(A)	70 dB(A)
Leq = (Equivalent Energy Level). The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period, typically one, eight or 24 hours.		
dB(A) = (A-weighted Sound Pressure Level). The sound pressure level, in decibels, as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear.		
Ldn = (Day-Night Noise Level). The average equivalent A-weighted sound level during a 24-hour day obtained by adding 10 decibels to the hourly noise levels measured during the night (from 10:00 p.m. to 7:00 a.m.). In this way Ldn takes into account the lower tolerance of people for noise during nighttime periods.		

(2) *Noise Limit Categories.* No person shall operate or cause to be operated a source of sound at a location or allow the creation of noise on property owned, leased, occupied, or otherwise controlled by the person, which causes the noise level, when measured on another property, either incorporated or unincorporated, to exceed any one of the following:

(A) The noise standard for the receiving land use as specified in Subdivision (b) (Noise-Impacted Areas), above, for a cumulative period of more than 30 minutes in any hour.

(B) The noise standard plus five dB(A) for a cumulative period of more than 15 minutes in any hour.

(C) The noise standard plus ten dB(A) for a cumulative period of more than five minutes in any hour.

(D) The noise standard plus 15 dB(A) for a cumulative period of more than one minute in any hour.

(E) The noise standard plus 20 dB(A) for any period of time.

(d) *Noise Standards for Adjacent Mobile Noise Sources.* Noise from mobile sources may affect adjacent properties adversely. When it does, the noise shall be mitigated for any new development to a level that shall not exceed the standards described in the following Table 83-3 (Noise Standards for Adjacent Mobile Noise Sources).

Table 83-3

Noise Standards for Adjacent Mobile Noise Sources

Land Use		***Ldn (or CNEL) dB(A)***	
Categories	***Uses***	***Interior*** (1)	***Exterior*** (2)
Residential	Single and multi-family, duplex, mobile homes	45	60(3)
Commercial	Hotel, motel, transient housing	45	60(3)
	Commercial retail, bank, restaurant	50	N/A
	Office building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	N/A
Institutional/Public	Hospital, nursing home, school classroom, religious institution, library	45	65
Open Space	Park	N/A	65

Notes:

(1) The indoor environment shall exclude bathrooms, kitchens, toilets, closets and corridors.

(2) The outdoor environment shall be limited to:
- Hospital/office building patios
- Hotel and motel recreation areas
- Mobile home parks

· Multi-family private patios or balconies · Park picnic areas · Private yard of single-family dwellings · School playgrounds
(3) An exterior noise level of up to 65 dB(A) (or CNEL) shall be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB(A) (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level shall necessitate the use of air conditioning or mechanical ventilation.
CNEL = (Community Noise Equivalent Level). The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night from 10:00 p.m. to 7:00 a.m.

(e) *Increases in Allowable Noise Levels.* If the measured ambient level exceeds any of the first four noise limit categories in Subdivision (d)(2), above, the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category in Subdivision (d)(2), above, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

(f) *Reductions in Allowable Noise Levels.* If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels in Table 83-2 (Noise Standards for Stationary Noise Sources) shall be reduced by five dB(A).

(g) *Exempt Noise.* The following sources of noise shall be exempt from the regulations of this Section:

(1) Motor vehicles not under the control of the commercial or industrial use.

(2) Emergency equipment, vehicles, and devices.

(3) Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

(h) *Noise Standards for Other Structures.* All other structures shall be sound attenuated against the combined input of all present and projected exterior noise to not exceed the criteria.

Table 83-4

Noise Standards for Other Structures

Typical Uses	***12-Hour Equivalent Sound Level (Interior) in dBA Ldn***
Educational, institutions, libraries, meeting facilities, etc.	45
General office, reception, etc.	50
Retail stores, restaurants, etc.	55
Other areas for manufacturing, assembly, testing, warehousing, etc.	65

In addition, the average of the maximum levels on the loudest of intrusive sounds occurring during a 24-hour period shall not exceed 65 dBA interior.

(Ord. 4011, passed - -2007; Am. Ord. 4245, passed - -2014)

APPENDIX 3.2:

COUNTY OF SAN BERNARDINO DEVELOPMENT CODE

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Chapter 9.50 - NOISE CONTROL

Sections:

9.50.010 - Purpose and intent.

A. It is the purpose of these regulations to implement the goals and objectives of the noise element of the city's general plan to establish community-wide noise standards and to serve as a reference for locating other city regulations relating to noise in the community. It is further the purpose of these regulations to recognize that the existence of excessive noise within the city is a condition that is detrimental to the health, safety, welfare and quality of life of the citizens and shall be regulated in the public interest.

B. In furtherance of the foregoing purpose, it is found and declared as follows:

1. The making, creation or maintenance of such loud, unnecessary, unnatural or unusual noises that are prolonged, unusual, annoying, disturbing and unnatural in their time, place and use are a detriment to public health, comfort, convenience, safety, general welfare and the peace and quiet of the city and its inhabitants; and

2. The public necessity for the provisions and prohibitions contained in and enacted by this chapter is declared as a matter of legislative determination and public policy, and it is further declared that the provisions and prohibitions set forth in and enacted by this chapter are in pursuance of and for the purpose of securing and promoting the public health, comfort, convenience, safety, general welfare and property and the peace and quiet of the city and its inhabitants.

(Ord. 1417 § 1 (part), 2008)

9.50.020 - Definitions.

The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

"Construction equipment" means tools, machinery or equipment used in connection with construction operations, including all types of "special construction" equipment as defined in the pertinent sections of California Vehicle Code when used in the construction process on any construction site, home improvement site or property maintenance site, regardless of whether such site be located on highway or off highway.

"Enforcement officer" means a city code enforcement officer or peace officer authorized to enforce the provisions and prohibitions of this chapter pursuant to Section 9.50.080.

"Plainly audible" means any sound that can be detected by a person using his or her unaided hearing faculties. As an example, if the sound source under investigation is a portable or personal vehicular sound amplification or reproduction device, the investigating enforcement officer need not determine the title of a song, specific words, or the artist performing the song. The detection of the vibration from the rhythmic bass component of the music is sufficient to constitute a plainly audible sound.

"Public right-of-way" means any street, avenue, boulevard, highway, sidewalk, alley or similar place, owned or controlled by a government entity.

"Public space" means any real property or structures on real property, owned by a government entity and normally accessible to the public, including but not limited to parks and other recreation areas.

"Responsible person" means:

1. Any person who owns, leases or is lawfully in charge of the property or motor vehicle where the noise violation takes place; or
2. Any person who owns or controls the source of the noise or violation. If the responsible person is a minor, then the parent or guardian who has custody of the child at the time of the violation shall be the responsible person who is liable under this chapter.

(Ord. 1417 § 1 (part), 2008)

9.50.030 - Prohibited acts.

A. It is unlawful for any person to engage in the following activities:

1. Sounding any horn or signal device on any automobile, motorcycle, bus or other motor vehicle in any other manner or circumstances or for any other purpose than required or permitted by the Vehicle Code or other California laws.
2. Racing the engine of any motor vehicle while the vehicle is not in motion, except when necessary to do so in the course of repairing, adjusting or testing the same.
3. Operating or permitting the use of any motor vehicle on any public right-of-way or public place or on private property within a residential zone for which the exhaust muffler, intake muffler or any other noise abatement device has been modified or changed in a manner such that the noise emitted by the motor vehicle is increased above that emitted by the vehicle as originally manufactured.
4. Operating or permitting the use or operation of personal or commercial music or sound amplification or production equipment that is:
   a. Plainly audible across property boundaries;
   b. Plainly audible through partitions common to two residences within a building;
   c. Plainly audible at a distance of fifty feet in any direction from the source of music or sound between the hours of eight a.m. and ten p.m.; or
   d. Plainly audible at a distance of twenty-five feet in any direction from the source of music or sound between the hours of ten p.m. and eight a.m.
5. The intentional sounding or permitting the sounding outdoors of any fire, burglar, or civil defense alarm, siren, whistle, or any motor vehicle burglar alarm, except for emergency purposes or for testing, unless such alarm is terminated within fifteen minutes of activation.
6. Creating excessive noise adjacent to any school, church, court or library while the same is in use, or adjacent to any hospital or care facility, which unreasonably interferes with the workings of such institution, or which disturbs or unduly annoys patients in the hospital, students in the school, users of the court or library, provided conspicuous signs are displayed in such streets indicating the presence of a school, institution of learning, church, court or hospital.
7. Making or knowingly and unreasonably permitting to be made any unreasonably loud, unnecessary or unusual noise that disturbs the comfort, repose, health, peace and quiet or which causes discomfort or annoyance to any reasonable person of normal sensitivity. The characteristics and conditions that may be considered in determining whether this section has been violated, include, but are not limited to, the following:
   a. The level of noise;

b. Whether the nature of the noise is usual or unusual;

c. Whether the origin of the noise is natural or unnatural;

d. The level of the background noise;

e. The proximity of the noise to sleeping facilities;

f. The nature and zoning of the areas within which the noise emanates;

g. The density of the inhabitation of the area within which the noise emanates;

h. The time of day or night the noise occurs;

i. The duration of the noise;

j. Whether the noise is recurrent, intermittent or constant; and

k. Whether the noise is produced by a commercial or noncommercial activity.

B. A violation of this section is an infraction and a public nuisance.

C. A violation of this section may result in the following:

1. Issuance of an infraction citation;
2. Issuance of a notice of public nuisance;
3. Imposition of criminal and civil penalties; and
4. Confiscation and impoundment as evidence, of the components that are amplifying or transmitting the prohibited noise.

D. An enforcement officer who encounters a violation of this section may issue a written notice to the responsible person demanding immediate abatement of the violation (written notice). The written notice shall inform the recipient that a second violation of the same provision within a seventy-two-hour period may result in the issuance of a criminal citation and/or notice of public nuisance, the imposition of criminal and civil penalties, and confiscation and impoundment as evidence, of the components that are amplifying or transmitting the prohibited noise.

E. Any peace officer who encounters a second violation of this section within a seventy-two-hour period following issuance of a written notice is empowered to confiscate and impound as evidence, any or all of the components amplifying or transmitting the sound.

F. Any person claiming legal ownership of the items confiscated and impounded under this section may request the return of the item by filing a written request with the police department within seven calendar days of the confiscation. Such requests shall be processed in accordance with the procedures adopted by the department.

(Ord. 1417 § 1 (part), 2008)

9.50.040 - Excessive noise and vibration emanating from a motor vehicle.

A. No person shall operating or occupy a motor vehicle on any public right-of-way, public place or private property, while operating or permitting the use or operation of any radio, stereo receiver, musical instrument, television, computer, compact disc player, tape recorder, cassette player or any other device for the production or reproduction of sound from within the motor vehicle so that the sound is plainly audible at a distance of fifty feet from such vehicle, or in the case of a motor vehicle on private property, beyond the property line.

B. Pursuant to Section 9.50.130, a violation of this section is a misdemeanor offense and a public nuisance.

C. A violation of this section may result in the following:

1. Issuance of a misdemeanor citation;

2. Issuance of a notice of public nuisance;
3. Imposition of criminal and civil penalties; and
4. Immediate confiscation and impoundment as evidence, of the components that are amplifying or transmitting the prohibited noise or the immediate confiscation and impoundment of the motor vehicle to which the component is attached if the same may not be removed without causing harm to the vehicle or the component.

D. Any person claiming legal ownership of a motor vehicle confiscated and impounded under this section may request the return of the vehicle by filing a written request with the police department within seven calendar days of the confiscation. Such requests shall be processed in accordance with the procedures adopted by the department.

E. Any person claiming legal ownership of the items confiscated and impounded under this section, other than a motor vehicle, may request the return of the item by filing a written request with the police department, which shall be processed in accordance with the procedures adopted by the department.

(Ord. 1417 § 1 (part), 2008)

9.50.050 - Controlled hours of operation.

It is unlawful for any person to engage in the following activities other than between the hours of seven a.m. and eight p.m. in all zones:

A. Operate or permit the use of powered model vehicles and planes;

B. Load or unload any vehicle, or operate or permit the use of dollies, carts, forklifts, or other wheeled equipment that causes any impulsive sound, raucous or unnecessary noise within one thousand feet of a residence;

C. Operate or permit the use of domestic power tools, or machinery or any other equipment or tool in any garage, workshop, house or any other structure;

D. Operate or permit the use of gasoline or electric powered leaf blowers, such as commonly used by gardeners and other persons for cleaning lawns, yards, driveways, gutters and other property;

E. Operate or permit the use of privately operated street/parking lot sweepers or vacuums, except that emergency work and/or work necessitated by unusual conditions may be performed with the written consent of the city manager;

F. Operate or permit the use of pile driver, steam or gasoline shovel, pneumatic hammer, steam or electric hoist or other similar devices;

G. Operate or permit the use of electrically operated compressor, fan, and other similar devices;

H. Perform ground maintenance on golf course grounds and tennis courts contiguous to golf courses that creates a noise disturbance across a residential or commercial property line;

I. Operate or permit the use of any motor vehicle with a gross vehicle weight rating in excess of ten thousand pounds, or of any auxiliary equipment attached to such a vehicle, including but not limited to refrigerated truck compressors, for a period longer than fifteen minutes in any hour while the vehicle is stationary and on a public right-of-way or public space except when movement of the vehicle is restricted by other traffic;

J. Repair, rebuild, reconstruct or dismantle any motor vehicle or other mechanical equipment or devices in a manner so as to be plainly audible across property lines.

(Ord. 1417 § 1 (part), 2008)

9.50.060 - Exemptions.

The following activities and noise sources shall be exempt from the provisions of this chapter:

A. Those noise events in the community (e.g., airport noise, arterial traffic noise, railroad noise) that are more accurately measured by application of the general plan noise element policy, utilizing the community noise equivalent level (CNEL) method;

B. Activities conducted on the grounds of any public or private school during regular hours of operation;

C. Outdoor gatherings, public dances, shows and sporting and entertainment events provided the events are authorized by the city;

D. Activities conducted at public spaces during regular hours of operation;

E. Any mechanical device, apparatus or equipment used, related to or connected with emergency machinery, vehicle or work;

F. All mechanical devices, apparatus or equipment which are utilized for the protection or salvage of agricultural crops during periods of potential or actual frost damage or other adverse weather conditions;

G. Mobile noise sounds associated with agricultural operations provided such operations do not take place between the hours of eight p.m. and seven a.m. on weekdays, including Saturdays, or at any time on Sunday or a state holiday;

H. Mobile noise sources associated with agricultural pest control through pesticide application;

I. Warning devices necessary for the protection of the public safety, including, but not limited to, police, fire and ambulance sirens and train horns and sounds for the purpose of alerting persons to the existence of an emergency;

J. Construction, repair or excavation necessary for the immediate preservation of life or property;

K. Construction, operation, maintenance and repairs of equipment, apparatus or facilities of park and recreation departments, public work projects or essential public services and facilities, including trash collection and those of public utilities subject to the regulatory jurisdiction of the California Public Utilities Commission;

L. Construction, repair or excavation work performed pursuant to a valid written agreement with the city or any of its political subdivisions which agreement provides for noise mitigation measures;

M. Any activity to the extent regulation thereof has been preempted by state or federal law;

N. Any activity or noise source governed elsewhere in this code. Such activities include but are not limited to:

1. Security alarm systems (see Chapter 7.01 of this code),
2. Animal noise (see Title 6 of this code),
3. Sound trucks and advertising by sound (see Chapter 9 of this code),
4. Performance standards for various commercial and industrial uses (see Title 18 of this code);

O. Sounds generated in commercial and industrial zones that are necessary and incidental to the uses permitted therein;

P. Sounds generated from or incidental to emergency repairs to any public works function; and

Q. Sounds generated in connection with speech or communication protected by the U.S. Constitution or the California Constitution, expect to the extent such sounds are subject to permissible time, manner and place restrictions.

(Ord. 1417 § 1 (part), 2008)

9.50.070 - Disturbances from construction activity.

A. No person shall be engaged or employed, or cause any other person to be engaged or employed, in any work of construction, erection, alteration, repair, addition, movement, demolition, or improvement to any building or structure except within the hours provided for by subsection B of this section.

B. The permitted hours for such construction work are as follows:

1. October 1st through April 30th.

Monday—Friday	7:00 a.m. to 5:30 p.m.
Saturday	8:00 a.m. to 5:00 p.m.
Sunday	No permissible hours
State holidays	No permissible hours

2. May 1st through September 30th.

Monday—Friday	6:00 a.m. to 7:00 p.m.
Saturday	8:00 a.m. to 5:00 p.m.
Sunday	No permissible hours
State holidays	No permissible hours

C. For purposes of this section, the following definitions shall apply:

1. "Building" means any structure used or intended for supporting or sheltering any use or occupancy.
2. "Structure" means that which is built or constructed, an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner.

D. For purposes of this section, the following exceptions shall apply:

1. Emergency repair of existing installations, equipment, or appliances; and
2. Such work that complies with the terms and conditions of a written early work permit issued by the city manager or his or her designee upon a showing of a sufficient need and justification for the permit due to hot or inclement weather, the use of an unusually long process material, or other circumstances of an unusual and compelling nature.

(Ord. 1417 § 1 (part), 2008)

9.50.080 - Administration.

Except as otherwise provided, the provisions and prohibitions of this chapter shall be jointly administered by and the responsibility of the city's police department and department of development services, code enforcement division. The chief of police may adopt administrative rules and regulations which are consistent with the provisions of this chapter for the purpose of implementing the same.

(Ord. 1417 § 1 (part), 2008)

9.50.090 - Cost recovery for second response.

A. Any and all personnel who may be deployed by the city pursuant to this chapter shall be deemed to be on regular duty under the general supervision of the chief of police, fire chief, the director of development services or other city department director, and any officer or employee in charge under their respective commands and shall be entitled to any and all benefits provided by law or ordinance for such personnel as employees of the city, except that the rate of pay for such special security services shall be set forth herein. The pay for each employee thus employed during such employment shall be at his or her actual rate of pay. The chief of police or other department director, as the case may be, shall report to the chief financial officer the name of the person, firm, organization or corporation requiring such personnel, the names of the employees so employed and the number of hours of employment of each. The chief financial officer shall thereupon bill the person.

B. Whenever any enforcement officer issues a written warning to a responsible person to discontinue a noise violation, the responsible person shall be liable for the actual cost of each subsequent response required to abate the violation within seventy-two hours of the issuance of the written warning (response charge).

C. The bill for the response charge shall be served upon the responsible person within thirty days after the violation. If the responsible person has no last known business or residence address, the location of the violation shall be deemed to be the proper address for service. The bill shall include a notice of the right of the person being charged to request a hearing to dispute the imposition of the response charge or the amount of the charge.

D. The response charge shall be deemed to be a civil debt to the city.

E. All responsible persons shall be jointly and severally liable for the response charge regardless of whether or not they received a written notice.

(Ord. 1417 § 1 (part), 2008)

9.50.100 - Public nuisance.

A violation of this chapter by any person responsible for committing, causing or maintaining such violation shall constitute a public nuisance that shall be subject to the provisions of Chapters 9.39 and 9.42 of this title.

(Ord. 1417 § 1 (part), 2008)

9.50.110 - Infraction violation.

A violation of Section 9.50.030, 9.50.050 or 9.50.070 of this chapter by any person responsible for committing, causing or maintaining such violation shall constitute an infraction violation and the violator shall be subject to the provisions set forth in Section 1.16.010 of this code, including but not limited to the imposition of any and all criminal penalties set forth therein.

(Ord. 1417 § 1 (part), 2008)

9.50.120 - Misdemeanor violation.

A violation of Section 9.50.040 of this chapter by any person responsible for committing, causing or maintaining such violation shall constitute a misdemeanor violation which shall be subject to the provisions set forth in Section 1.16.010 of this code, including but not limited to the imposition of any and all criminal penalties set forth therein.

(Ord. 1417 § 1 (part), 2008)

9.50.130 - Civil fines.

Any person convicted of an infraction or misdemeanor violation under this chapter shall, for each separate violation, be subject to: (A) a fine in an amount not to exceed two hundred fifty dollars for a first conviction of an offense; (B) a fine in an amount not to exceed five hundred dollars for a second conviction of the same offense within a twelve-month period from the date of the first offense; and (C) a fine in an amount not to exceed seven hundred fifty dollars for the third conviction of the same offense within a twelve-month period from the date of the first offense. The fine for a fourth and any subsequent convictions of the same offense within a twelve-month period from the date of the first offense shall be one thousand dollars.

(Ord. 1417 § 1 (part), 2008)

9.50.140 - Additional penalties.

Nothing in this chapter shall preclude the city from pursuing any other legal remedies provided by this code or otherwise available to the city at law or in equity.

(Ord. 1417 § 1 (part), 2008)

APPENDIX 5.1:

STUDY AREA PHOTOS

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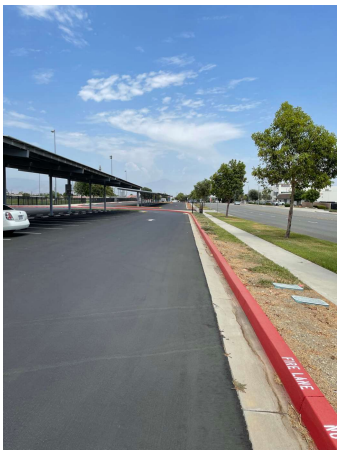
JN: 14014 Study Area Photos



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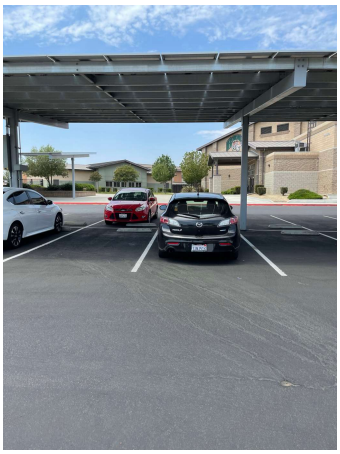

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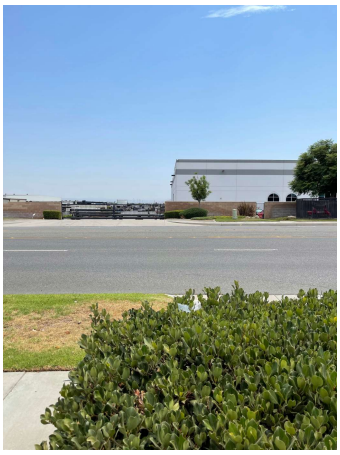

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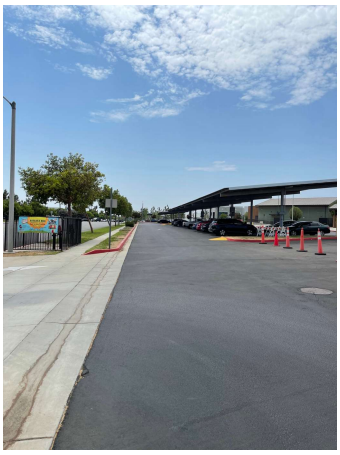

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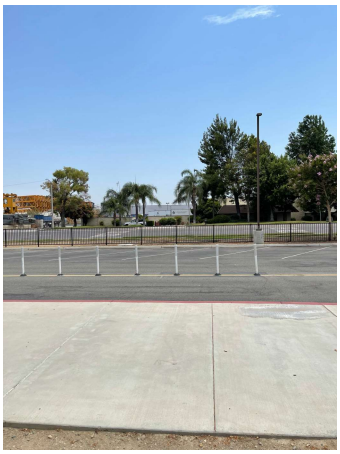

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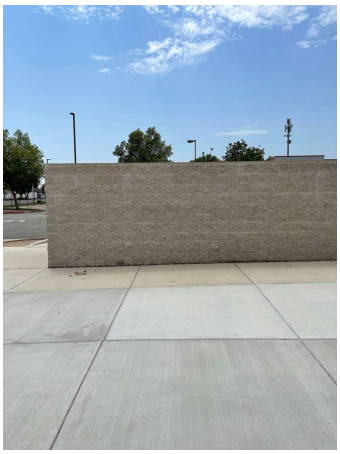

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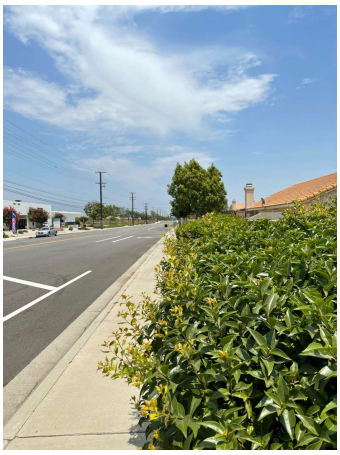

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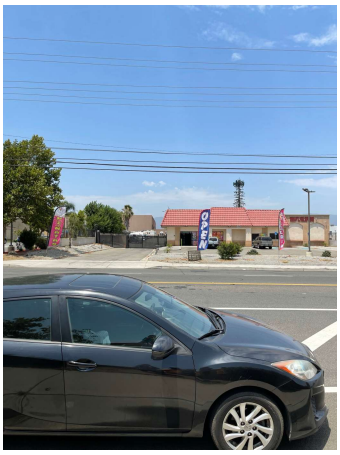

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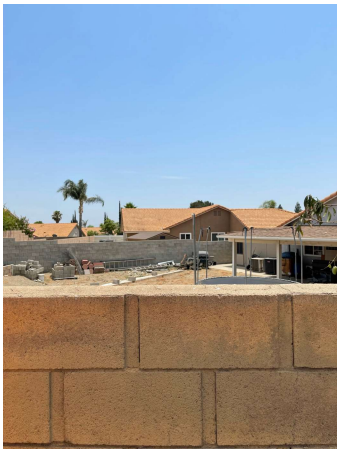

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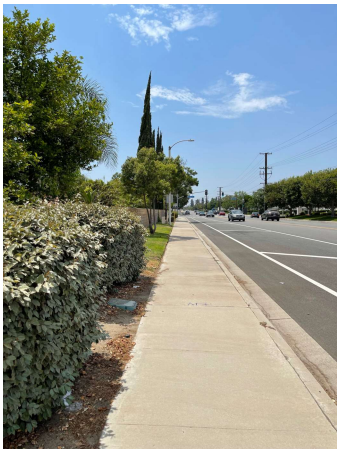

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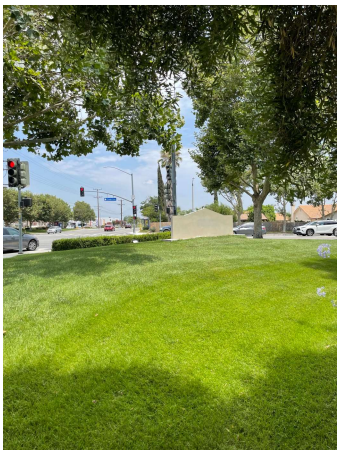

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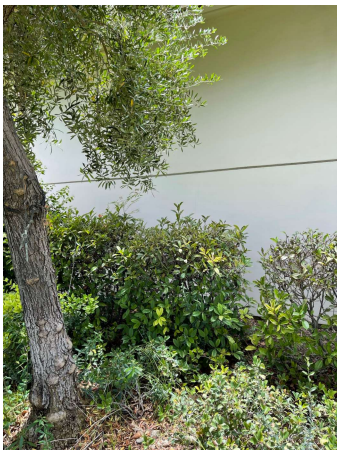

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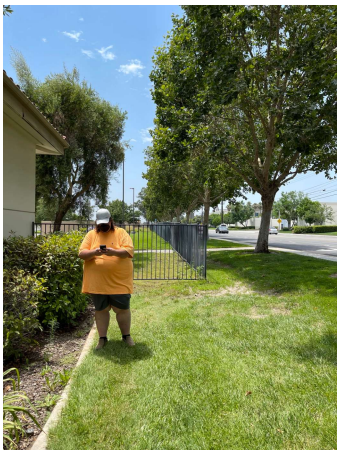

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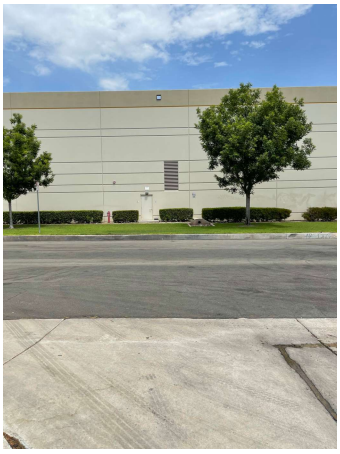

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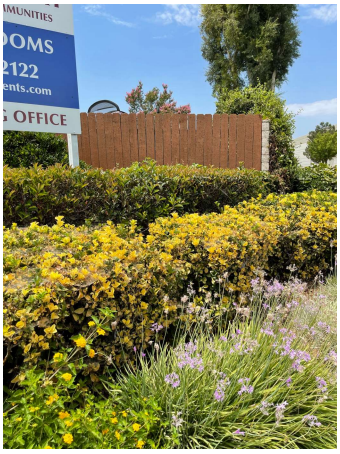

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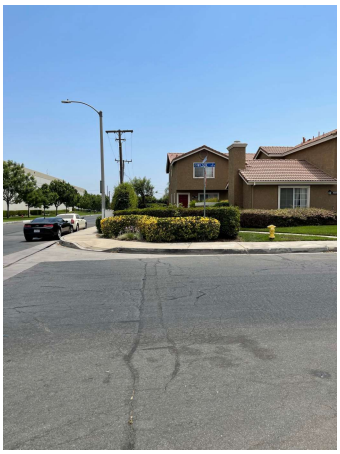

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L5-W
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APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

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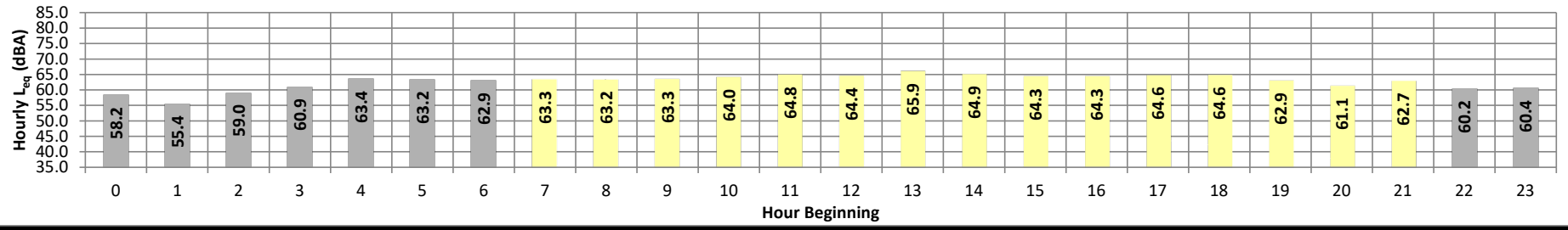
24-Hour Noise Level Measurement Summary

Date: Tuesday, July 13, 2021 *Location:* L1-Located north of the project site near Rialto Middle School *Meter:* Piccolo II *JN:* 14014

Project: Durst Warehouse *Source:* at 1262 West Rialto Ave. *Analyst:* A. Khan

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	58.2	69.9	49.1	69.5	68.9	65.5	62.6	55.4	52.0	49.9	49.7	49.3	58.2	10.0	68.2
	1	55.4	63.7	51.2	63.3	62.5	60.2	58.4	55.2	53.9	52.1	51.8	51.4	55.4	10.0	65.4
	2	59.0	68.6	54.1	68.2	67.5	65.2	62.9	57.7	56.1	54.9	54.6	54.3	59.0	10.0	69.0
	3	60.9	70.5	55.1	70.2	69.6	67.6	65.6	59.4	57.5	55.7	55.5	55.3	60.9	10.0	70.9
	4	63.4	72.1	58.6	71.8	71.2	69.2	67.6	62.9	60.6	59.3	59.0	58.8	63.4	10.0	73.4
	5	63.2	72.2	57.9	71.8	71.1	69.0	67.3	62.8	60.1	58.8	58.5	58.1	63.2	10.0	73.2
	6	62.9	73.4	51.1	73.0	72.3	70.1	68.2	62.1	56.9	52.3	51.8	51.3	62.9	10.0	72.9
Day	7	63.3	73.4	51.2	73.1	72.4	70.3	68.4	63.1	57.8	52.3	51.8	51.4	63.3	0.0	63.3
	8	63.2	73.4	51.8	72.8	72.0	69.9	68.3	63.3	58.3	52.9	52.3	51.9	63.2	0.0	63.2
	9	63.3	71.9	51.6	71.5	70.9	69.3	68.1	64.2	60.2	53.5	52.7	51.8	63.3	0.0	63.3
	10	64.0	73.6	50.9	73.3	72.7	70.4	68.7	64.4	59.8	52.6	51.7	51.1	64.0	0.0	64.0
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	14	64.9	74.2	55.2	73.8	73.1	71.2	69.6	65.2	61.7	56.5	55.9	55.3	64.9	0.0	64.9
	15	64.3	73.4	54.8	72.8	72.0	70.0	68.6	65.0	61.5	56.2	55.6	54.9	64.3	0.0	64.3
	16	64.3	83.5	54.2	82.9	81.7	78.8	77.0	67.8	62.1	56.0	55.1	54.4	64.3	0.0	64.3
	17	64.6	73.3	53.5	73.0	72.5	71.1	69.5	65.0	61.2	55.1	54.3	53.6	64.6	0.0	64.6
	18	64.6	74.1	52.2	73.7	73.1	71.2	69.7	64.9	60.6	53.7	53.1	52.4	64.6	0.0	64.6
	19	62.9	72.3	51.2	71.9	71.1	69.3	67.9	63.2	58.7	52.7	51.9	51.3	62.9	5.0	67.9
	20	61.1	70.3	50.4	69.8	69.2	67.3	66.2	61.9	56.9	51.6	51.1	50.6	61.1	5.0	66.1
	21	62.7	76.7	57.9	76.1	75.2	72.1	70.0	62.7	60.3	58.7	58.5	58.1	62.7	5.0	67.7
Night	22	60.2	69.2	53.4	68.9	68.4	66.9	65.2	59.7	56.3	54.1	53.8	53.6	60.2	10.0	70.2
	23	60.4	70.4	54.5	70.2	69.6	67.3	65.0	59.1	56.3	55.0	54.8	54.6	60.4	10.0	70.4

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	61.1	70.3	50.4	69.8	69.2	67.3	66.2	61.9	56.9	51.6	51.1	50.6
	Max	65.9	83.5	57.9	82.9	81.7	78.8	77.0	67.8	62.1	58.7	58.5	58.1
Energy Average		64.0	Average:		74.0	73.3	71.2	69.6	64.4	60.1	54.5	53.8	53.2
Night	Min	55.4	63.7	49.1	63.3	62.5	60.2	58.4	55.2	52.0	49.9	49.7	49.3
	Max	63.4	73.4	58.6	73.0	72.3	70.1	68.2	62.9	60.6	59.3	59.0	58.8
Energy Average		61.0	Average:		69.6	69.0	66.8	64.7	59.4	56.6	54.7	54.4	54.1

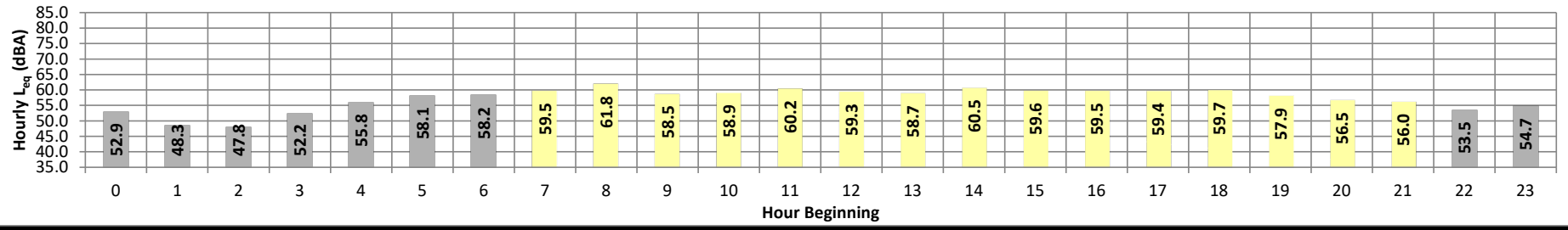
24-Hour	L_{eq} (dBA) Daytime (7am-10pm)	Nighttime (10pm-7am)
63.1	**64.0**	**61.0**

24-Hour Noise Level Measurement Summary

Date: Tuesday, July 13, 2021 *Location:* L2- Located northeast of the Project site near Charlotte N. *Meter:* Piccolo II *JN:* 14014

Project: Durst Warehouse *Source:* Werner Elementary School at 1050 West Rialto Ave. *Analyst:* A. Khan

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	52.9	67.4	44.4	66.8	66.0	63.6	61.0	51.1	47.4	45.1	44.8	44.5	52.9	10.0	62.9
	1	48.3	58.1	41.4	57.5	56.9	55.2	53.8	47.2	43.9	41.8	41.7	41.5	48.3	10.0	58.3
	2	47.8	56.5	41.8	56.1	55.5	54.5	53.4	47.0	43.8	42.2	42.1	41.9	47.8	10.0	57.8
	3	52.2	61.7	42.8	61.4	60.8	59.4	58.2	51.1	46.0	43.4	43.2	43.0	52.2	10.0	62.2
	4	55.8	64.6	45.0	64.3	63.9	62.9	61.2	56.2	51.2	46.0	45.6	45.2	55.8	10.0	65.8
	5	58.1	66.9	48.3	66.7	66.3	64.8	63.5	58.1	53.2	49.1	48.7	48.4	58.1	10.0	68.1
	6	58.2	68.4	48.8	68.1	67.8	66.9	65.7	59.2	54.9	49.7	49.4	49.0	58.2	10.0	68.2
Day	7	59.5	67.8	49.5	67.5	67.2	66.1	64.8	60.1	55.7	50.5	50.0	49.6	59.5	0.0	59.5
	8	61.8	69.1	55.6	68.7	68.3	67.2	66.2	62.4	59.4	56.5	56.1	55.8	61.8	0.0	61.8
	9	58.5	65.7	48.3	65.3	65.0	63.9	63.2	60.0	55.8	49.9	49.1	48.5	58.5	0.0	58.5
	10	58.9	66.8	48.5	66.4	66.0	65.2	64.0	59.5	55.8	50.0	49.3	48.7	58.9	0.0	58.9
	11	60.2	70.0	48.8	69.6	69.0	66.8	65.0	60.1	56.1	50.4	49.5	48.9	60.2	0.0	60.2
	12	59.3	67.3	49.4	67.1	66.6	65.2	64.1	60.0	56.4	50.8	50.1	49.5	59.3	0.0	59.3
	13	58.7	70.7	50.1	70.2	69.7	67.5	64.9	59.6	56.3	51.7	50.9	50.3	58.7	0.0	58.7
	14	60.5	68.7	52.3	68.3	67.6	66.3	64.9	61.0	57.9	53.7	53.0	52.4	60.5	0.0	60.5
	15	59.6	66.9	52.4	66.6	66.2	64.7	63.4	60.4	57.6	53.8	53.1	52.5	59.6	0.0	59.6
	16	59.5	71.1	50.8	70.8	70.4	69.2	67.5	61.2	57.8	52.7	51.8	51.0	59.5	0.0	59.5
	17	59.4	67.3	50.8	67.0	66.5	65.0	63.7	60.4	57.1	52.2	51.6	50.9	59.4	0.0	59.4
	18	59.7	77.4	50.3	76.7	75.1	70.3	66.2	60.6	57.3	51.8	51.1	50.5	59.7	0.0	59.7
	19	57.9	65.9	47.7	65.6	65.2	63.8	62.8	58.8	54.7	49.1	48.3	47.8	57.9	5.0	62.9
	20	56.5	65.0	46.3	64.5	64.0	62.6	61.3	57.4	53.3	47.5	47.0	46.5	56.5	5.0	61.5
	21	56.0	65.4	45.9	65.0	64.7	62.5	60.8	56.2	52.2	47.0	46.5	46.1	56.0	5.0	61.0
Night	22	53.5	60.7	45.5	60.5	60.0	59.2	58.3	54.4	50.7	46.4	46.0	45.6	53.5	10.0	63.5
	23	54.7	64.3	46.4	63.8	63.1	61.1	59.7	54.6	50.3	47.3	47.0	46.6	54.7	10.0	64.7

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	56.0	65.0	45.9	64.5	64.0	62.5	60.8	56.2	52.2	47.0	46.5	46.1
	Max	61.8	77.4	55.6	76.7	75.1	70.3	67.5	62.4	59.4	56.5	56.1	55.8
Energy Average		59.3	Average:		68.0	67.4	65.7	64.2	59.9	56.2	51.2	50.5	49.9
Night	Min	47.8	56.5	41.4	56.1	55.5	54.5	53.4	47.0	43.8	41.8	41.7	41.5
	Max	58.2	68.4	48.8	68.1	67.8	66.9	65.7	59.2	54.9	49.7	49.4	49.0
Energy Average		54.8	Average:		62.8	62.2	60.8	59.4	53.2	49.0	45.7	45.4	45.1

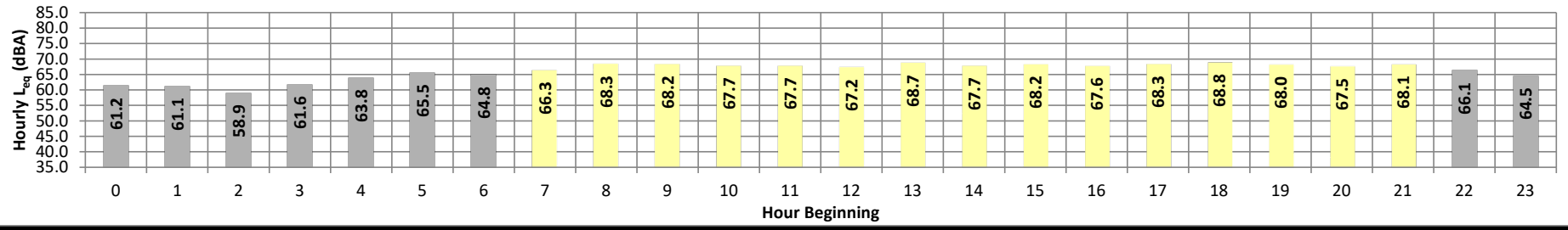
L_{eq} (dBA)		
24-Hour	Daytime (7am-10pm)	Nighttime (10pm-7am)
58.1	**59.3**	**54.8**

24-Hour Noise Level Measurement Summary

Date: Tuesday, July 13, 2021 | *Location:* L3- Located south of the Project site near single-family | *Meter:* Piccolo II | *JN:* 14014

Project: Durst Warehouse | *Source:* residence at 503 South Quince Ave. | *Analyst:* A. Khan

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	61.2	82.6	48.2	82.0	80.7	76.1	70.9	59.2	54.3	49.3	48.8	48.3	61.2	10.0	71.2
	1	61.1	80.9	51.6	80.4	79.5	76.0	72.8	59.1	55.4	52.6	52.2	51.8	61.1	10.0	71.1
	2	58.9	69.0	52.1	68.6	67.8	65.1	63.1	58.0	55.5	53.1	52.7	52.2	58.9	10.0	68.9
	3	61.6	72.7	53.5	72.4	71.7	68.7	66.3	59.7	56.7	54.2	53.9	53.6	61.6	10.0	71.6
	4	63.8	75.4	49.7	75.0	74.2	71.4	68.8	62.2	57.0	51.3	50.7	49.9	63.8	10.0	73.8
	5	65.5	79.5	53.0	78.9	78.0	75.5	72.6	64.7	59.9	54.4	53.8	53.1	65.5	10.0	75.5
	6	64.8	75.9	51.9	75.6	74.8	71.4	69.2	64.1	59.5	53.7	52.8	52.1	64.8	10.0	74.8
Day	7	66.3	88.3	52.6	87.6	86.4	81.2	76.2	65.9	61.0	54.3	53.5	52.8	66.3	0.0	66.3
	8	68.3	81.7	54.1	81.3	80.6	77.4	74.8	67.7	62.6	56.2	55.2	54.4	68.3	0.0	68.3
	9	68.2	79.0	61.9	78.2	76.9	73.9	72.1	67.8	65.0	62.5	62.2	62.0	68.2	0.0	68.2
	10	67.7	77.1	57.3	76.8	76.1	73.8	72.2	68.1	64.1	59.1	58.3	57.5	67.7	0.0	67.7
	11	67.7	79.2	52.7	78.7	77.7	74.6	72.6	66.7	61.8	55.0	53.8	52.8	67.7	0.0	67.7
	12	67.2	78.1	55.5	77.6	76.8	74.0	71.3	66.6	63.1	57.9	57.2	56.0	67.2	0.0	67.2
	13	68.7	80.0	54.8	79.5	78.5	75.8	73.7	67.4	63.0	57.0	56.0	55.0	68.7	0.0	68.7
	14	67.7	84.4	55.7	83.9	83.0	79.5	76.3	68.0	62.9	57.4	56.5	55.9	67.7	0.0	67.7
	15	68.2	84.4	56.3	83.8	82.5	77.8	73.9	67.5	63.2	57.9	57.2	56.5	68.2	0.0	68.2
	16	67.6	83.2	55.2	82.6	81.6	77.9	74.8	68.4	63.4	57.3	56.4	55.4	67.6	0.0	67.6
	17	68.3	83.8	55.1	83.1	82.1	78.7	75.7	68.3	63.5	56.9	56.0	55.2	68.3	0.0	68.3
	18	68.8	89.3	55.2	88.2	86.9	82.5	79.3	70.2	64.2	57.2	56.1	55.4	68.8	0.0	68.8
	19	68.0	78.8	53.6	78.4	77.5	74.4	72.6	67.8	63.1	55.9	54.8	53.8	68.0	5.0	73.0
	20	67.5	84.2	53.3	83.4	82.3	78.6	74.3	67.1	62.8	55.7	54.6	53.5	67.5	5.0	72.5
	21	68.1	79.9	54.4	79.4	78.4	75.3	72.4	66.6	62.7	56.9	55.7	54.6	68.1	5.0	73.1
Night	22	66.1	81.2	51.2	80.5	79.1	75.1	71.7	64.5	59.1	53.0	52.2	51.5	66.1	10.0	76.1
	23	64.5	76.6	51.9	76.0	75.0	72.1	69.5	61.5	56.8	52.7	52.3	51.9	64.5	10.0	74.5

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	66.3	77.1	52.6	76.8	76.1	73.8	71.3	65.9	61.0	54.3	53.5	52.8
	Max	68.8	89.3	61.9	88.2	86.9	82.5	79.3	70.2	65.0	62.5	62.2	62.0
Energy Average		67.9	Average:		81.5	80.5	77.0	74.1	67.6	63.1	57.1	56.2	55.4
Night	Min	58.9	69.0	48.2	68.6	67.8	65.1	63.1	58.0	54.3	49.3	48.8	48.3
	Max	66.1	82.6	53.5	82.0	80.7	76.1	72.8	64.7	59.9	54.4	53.9	53.6
Energy Average		63.6	Average:		76.6	75.6	72.4	69.4	61.5	57.1	52.7	52.2	51.6

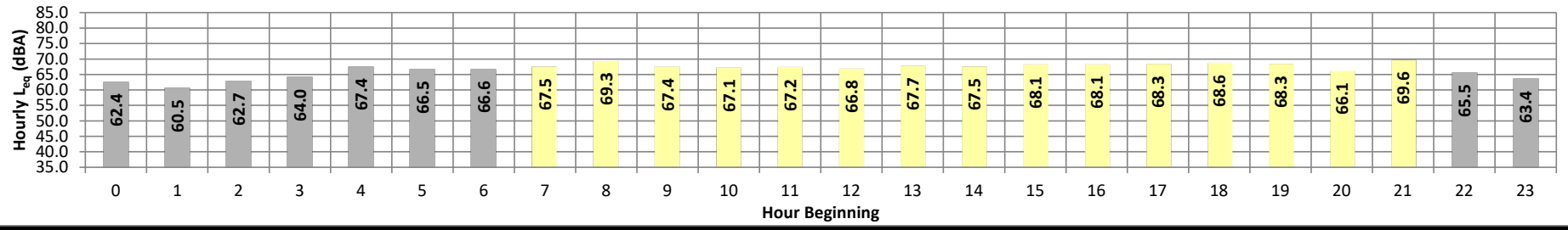
L_{eq} (dBA)		
24-Hour	Daytime (7am-10pm)	Nighttime (10pm-7am)
66.8	**67.9**	**63.6**

24-Hour Noise Level Measurement Summary

Date: Tuesday, July 13, 2021 *Location:* L4- Located south of the Project site near Calvary Chapel *Meter:* Piccolo II *JN:* 14014

Project: Durst Warehouse *Source:* Rialto at 1391 West Merrill Ave. *Analyst:* A. Khan

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	62.4	71.1	57.7	70.4	69.6	66.9	65.7	62.8	60.6	58.2	58.0	57.8	62.4	10.0	72.4
	1	60.5	68.1	55.4	67.5	66.9	65.2	64.2	60.8	58.8	56.4	56.0	55.5	60.5	10.0	70.5
	2	62.7	73.0	55.9	72.1	70.9	68.3	66.5	62.2	59.8	57.1	56.7	56.1	62.7	10.0	72.7
	3	64.0	73.9	56.9	73.1	72.1	69.7	68.1	63.8	61.1	58.1	57.7	57.1	64.0	10.0	74.0
	4	67.4	77.2	59.7	76.6	75.9	73.9	72.1	67.0	63.8	60.3	60.0	59.7	67.4	10.0	77.4
	5	66.5	75.9	55.4	75.2	74.3	72.3	70.9	67.1	63.8	57.4	56.4	55.5	66.5	10.0	76.5
	6	66.6	75.6	56.1	75.0	74.1	72.3	71.0	67.4	63.7	58.3	57.2	56.3	66.6	10.0	76.6
Day	7	67.5	77.4	57.1	76.7	75.7	73.4	71.7	67.8	64.6	58.9	58.1	57.2	67.5	0.0	67.5
	8	69.3	80.6	57.6	80.0	79.0	75.9	73.9	68.3	64.8	59.9	58.7	57.8	69.3	0.0	69.3
	9	67.4	77.7	56.2	76.9	75.9	73.7	71.7	67.3	64.3	58.1	57.2	56.4	67.4	0.0	67.4
	10	67.1	77.0	56.6	76.3	75.3	73.1	71.6	67.5	63.8	58.6	57.7	56.8	67.1	0.0	67.1
	11	67.2	77.4	56.1	76.7	75.8	73.0	71.6	67.5	63.9	58.2	57.2	56.3	67.2	0.0	67.2
	12	66.8	75.6	56.4	75.0	74.3	72.8	71.6	67.4	63.7	58.1	57.3	56.6	66.8	0.0	66.8
	13	67.7	82.1	56.6	81.4	80.2	78.1	76.4	68.9	64.1	58.8	57.8	56.8	67.7	0.0	67.7
	14	67.5	79.5	57.9	78.6	77.3	73.9	72.2	67.8	64.6	59.9	59.0	58.1	67.5	0.0	67.5
	15	68.1	78.4	58.3	77.9	77.1	74.3	72.5	67.6	64.7	60.3	59.4	58.5	68.1	0.0	68.1
	16	68.1	82.2	58.3	81.4	80.6	77.3	74.1	68.7	64.8	60.4	59.5	58.5	68.1	0.0	68.1
	17	68.3	78.4	58.7	77.7	76.9	74.4	72.7	68.0	64.9	60.5	59.7	58.8	68.3	0.0	68.3
	18	68.6	81.1	57.0	80.4	79.6	77.1	75.1	68.0	64.5	59.2	58.2	57.2	68.6	0.0	68.6
	19	68.3	80.3	55.2	79.5	78.6	76.3	74.3	67.3	63.3	57.6	56.5	55.4	68.3	5.0	73.3
	20	66.1	76.2	55.9	75.6	74.7	73.0	71.8	66.8	62.9	57.8	56.8	56.0	66.1	5.0	71.1
	21	69.6	81.6	60.2	80.7	79.7	77.3	75.8	71.4	67.5	62.6	61.7	60.6	69.6	5.0	74.6
Night	22	65.5	75.1	55.9	74.5	73.9	72.3	71.1	65.0	61.5	57.4	56.8	56.1	65.5	10.0	75.5
	23	63.4	74.5	51.2	73.8	73.0	70.9	68.6	62.3	58.2	52.4	51.8	51.3	63.4	10.0	73.4

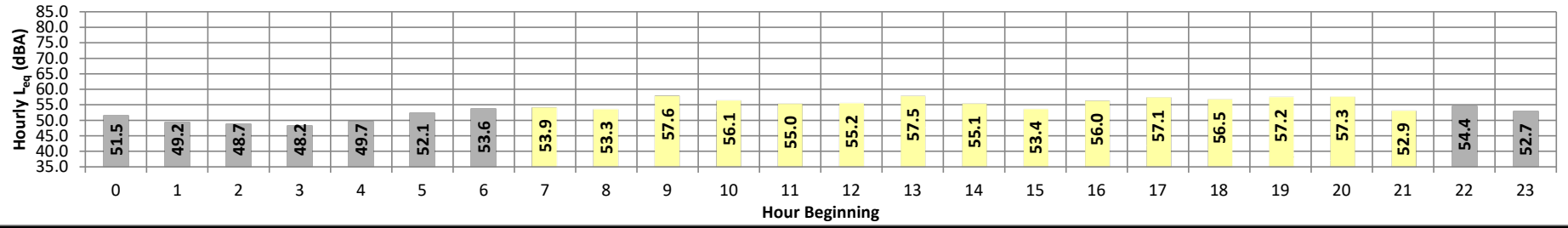
Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	66.1	75.6	55.2	75.0	74.3	72.8	71.6	66.8	62.9	57.6	56.5	55.4
	Max	69.6	82.2	60.2	81.4	80.6	78.1	76.4	71.4	67.5	62.6	61.7	60.6
Energy Average		67.9	Average:		78.3	77.4	74.9	73.1	68.0	64.4	59.3	58.3	57.4
Night	Min	60.5	68.1	51.2	67.5	66.9	65.2	64.2	60.8	58.2	52.4	51.8	51.3
	Max	67.4	77.2	59.7	76.6	75.9	73.9	72.1	67.4	63.8	60.3	60.0	59.7
Energy Average		64.9	Average:		73.2	72.3	70.2	68.7	64.3	61.3	57.3	56.7	56.2

L_{eq} (dBA)		
24-Hour	Daytime (7am-10pm)	Nighttime (10pm-7am)
67.0	**67.9**	**64.9**

24-Hour Noise Level Measurement Summary

Date: Tuesday, July 13, 2021 | *Location:* L5 - Located west of the Project site near single-family | *Meter:* Piccolo II | *JN:* 14014
Project: Durst Warehouse | *Source:* residence at 371 South Ironwood Ave. | *Analyst:* A. Khan

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	51.5	60.7	43.4	60.2	59.6	57.7	56.2	51.3	48.5	44.8	44.0	43.6	51.5	10.0	61.5
	1	49.2	61.6	40.7	61.0	60.1	56.9	52.9	46.0	42.7	41.3	41.1	40.9	49.2	10.0	59.2
	2	48.7	61.5	40.9	59.9	58.5	54.8	52.6	47.4	43.6	41.5	41.3	41.0	48.7	10.0	58.7
	3	48.2	59.6	42.2	59.2	58.6	54.3	51.3	46.0	44.0	42.7	42.6	42.3	48.2	10.0	58.2
	4	49.7	59.3	43.2	58.9	58.4	56.8	55.0	48.1	45.6	43.8	43.6	43.4	49.7	10.0	59.7
	5	52.1	64.6	43.7	63.5	62.1	59.3	57.7	48.8	45.8	44.3	44.1	43.9	52.1	10.0	62.1
	6	53.6	74.0	45.7	73.4	72.6	71.2	69.3	62.0	49.0	46.4	46.1	45.8	53.6	10.0	63.6
Day	7	53.9	62.9	46.0	62.5	62.3	61.4	59.9	52.6	48.5	46.6	46.4	46.2	53.9	0.0	53.9
	8	53.3	62.0	48.5	61.3	60.8	59.3	57.7	52.8	51.0	49.3	49.0	48.7	53.3	0.0	53.3
	9	57.6	77.0	53.7	76.7	76.2	74.4	72.3	65.3	61.7	55.7	54.7	53.9	57.6	0.0	57.6
	10	56.1	64.9	45.8	64.5	63.8	62.6	61.5	56.5	51.4	47.3	46.6	46.0	56.1	0.0	56.1
	11	55.0	74.6	42.3	73.7	71.9	66.6	63.4	53.0	47.7	43.5	42.9	42.5	55.0	0.0	55.0
	12	55.2	70.0	45.1	69.6	69.3	67.1	65.0	58.1	54.2	47.5	46.2	45.4	55.2	0.0	55.2
	13	57.5	68.7	47.1	68.3	68.0	66.5	65.0	59.2	53.7	48.8	48.1	47.3	57.5	0.0	57.5
	14	55.1	67.6	45.8	66.7	65.4	62.1	59.3	53.2	49.6	46.7	46.4	45.9	55.1	0.0	55.1
	15	53.4	63.0	47.2	62.5	61.7	59.6	58.0	52.8	50.5	48.1	47.7	47.4	53.4	0.0	53.4
	16	56.0	64.9	47.4	64.5	63.7	62.1	60.8	56.0	52.9	49.7	48.3	47.5	56.0	0.0	56.0
	17	57.1	69.3	46.4	68.8	67.8	64.5	61.4	54.7	51.1	47.7	47.1	46.5	57.1	0.0	57.1
	18	56.5	79.8	47.8	78.9	77.6	73.4	70.5	61.5	54.0	48.8	48.4	47.9	56.5	0.0	56.5
	19	57.2	75.0	48.8	74.4	73.7	70.8	67.4	60.6	57.3	50.5	49.7	49.0	57.2	5.0	62.2
	20	57.3	67.8	45.1	67.2	66.4	64.8	62.9	55.5	51.9	46.5	45.8	45.3	57.3	5.0	62.3
	21	52.9	73.8	45.1	72.7	71.6	67.5	62.6	53.3	48.9	45.8	45.5	45.2	52.9	5.0	57.9
Night	22	54.4	68.1	44.7	67.5	67.0	65.1	61.5	54.1	50.0	45.6	45.3	44.9	54.4	10.0	64.4
	23	52.7	63.5	45.1	62.8	61.7	59.7	57.7	51.2	48.7	46.2	45.5	45.3	52.7	10.0	62.7

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	52.9	62.0	42.3	61.3	60.8	59.3	57.7	52.6	47.7	43.5	42.9	42.5
	Max	57.6	79.8	53.7	78.9	77.6	74.4	72.3	65.3	61.7	55.7	54.7	53.9
Energy Average		55.9	Average:		68.8	68.0	65.5	63.2	56.3	52.3	48.2	47.5	47.0
Night	Min	48.2	59.3	40.7	58.9	58.4	54.3	51.3	46.0	42.7	41.3	41.1	40.9
	Max	54.4	74.0	45.7	73.4	72.6	71.2	69.3	62.0	50.0	46.4	46.1	45.8
Energy Average		51.6	Average:		62.9	62.1	59.5	57.1	50.5	46.4	44.1	43.7	43.4

24-Hour	L_{eq} (dBA) Daytime (7am-10pm)	Nighttime (10pm-7am)
54.7	**55.9**	**51.6**

URBAN CROSSROADS

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APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE CONTOURS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E | Project Name: Durst Drive Warehouse
Road Name: Cedar Av. | Job Number: 14014
Road Segment: n/o Dwy. 1

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,480	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,078	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.21	-0.75	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.93	-0.73	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-20.74	-0.73	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.7	67.0	65.3	59.2	67.8	68.4
Medium Trucks:	62.6	62.3	55.9	54.4	62.8	63.1
Heavy Trucks:	61.6	61.4	52.3	53.6	61.9	62.1
Vehicle Noise:	69.6	69.1	65.9	61.3	69.8	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	58	125	270	582
CNEL:	62	135	290	625

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EA 2023 | Project Name: Durst Drive Warehouse
Road Name: Cedar Av. | Job Number: 14014
Road Segment: n/o Dwy. 1

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,591	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,161	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.38	-0.75	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.76	-0.73	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-20.57	-0.73	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.9	67.2	65.4	59.4	68.0	68.6
Medium Trucks:	62.8	62.5	56.1	54.6	63.0	63.3
Heavy Trucks:	61.8	61.5	52.5	53.8	62.1	62.2
Vehicle Noise:	69.8	69.3	66.1	61.4	70.0	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	60	129	278	598
CNEL:	64	138	298	641

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E+P | Project Name: Durst Drive Warehouse
Road Name: Cedar Av. | Job Number: 14014
Road Segment: n/o Dwy. 1

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,648	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,090	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	96.79%
Medium Trucks:	84.8%	4.9%	10.3%	2.35%
Heavy Trucks:	86.5%	2.7%	10.8%	0.86%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.22	-0.75	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.92	-0.73	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-19.31	-0.73	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.7	67.0	65.3	59.2	67.9	68.5
Medium Trucks:	62.6	62.3	55.9	54.4	62.9	63.1
Heavy Trucks:	63.0	62.8	53.8	55.0	63.4	63.5
Vehicle Noise:	69.9	69.4	66.0	61.6	70.1	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	61	131	282	608
CNEL:	65	140	302	650

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAP 2023 | Project Name: Durst Drive Warehouse
Road Name: Cedar Av. | Job Number: 14014
Road Segment: n/o Dwy. 1

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,759	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,174	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	96.80%
Medium Trucks:	84.8%	4.9%	10.3%	2.35%
Heavy Trucks:	86.5%	2.7%	10.8%	0.85%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.39	-0.75	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.75	-0.73	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-19.19	-0.73	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.9	67.2	65.5	59.4	68.0	68.6
Medium Trucks:	62.8	62.5	56.1	54.6	63.0	63.3
Heavy Trucks:	63.1	62.9	53.9	55.1	63.5	63.6
Vehicle Noise:	70.1	69.5	66.2	61.7	70.2	70.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	62	134	289	623
CNEL:	67	144	309	667

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAC 2023 | Project Name: Durst Drive Warehouse
Road Name: Cedar Av. | Job Number: 14014
Road Segment: n/o Dwy. 1

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,395	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,373	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.78	-0.75	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.35	-0.73	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-20.16	-0.73	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.3	67.6	65.8	59.8	68.4	69.0
Medium Trucks:	63.2	62.9	56.5	55.0	63.4	63.7
Heavy Trucks:	62.2	62.0	52.9	54.2	62.5	62.6
Vehicle Noise:	70.2	69.7	66.5	61.8	70.4	70.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	64	137	295	637
CNEL:	68	147	317	683

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E | Project Name: Durst Drive Warehouse
Road Name: Cedar Av. | Job Number: 14014
Road Segment: n/o Merill Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,773	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,024	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.09	-0.75	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.05	-0.73	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-20.85	-0.73	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.6	66.9	65.2	59.1	67.7	68.3
Medium Trucks:	62.5	62.2	55.8	54.3	62.7	63.0
Heavy Trucks:	61.5	61.3	52.2	53.5	61.8	62.0
Vehicle Noise:	69.5	69.0	65.8	61.1	69.7	70.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	57	123	266	572
CNEL:	61	132	285	614

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAPC 2023 | Project Name: Durst Drive Warehouse
Road Name: Cedar Av. | Job Number: 14014
Road Segment: n/o Dwy. 1

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,491	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,381	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.03%
Medium Trucks:	84.8%	4.9%	10.3%	2.35%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.80	-0.75	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.35	-0.73	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-20.16	-0.73	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.3	67.6	65.9	59.8	68.4	69.0
Medium Trucks:	63.2	62.9	56.5	55.0	63.4	63.7
Heavy Trucks:	62.2	62.0	52.9	54.2	62.5	62.6
Vehicle Noise:	70.2	69.7	66.5	61.8	70.4	70.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	64	137	296	637
CNEL:	68	147	317	684

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E+P | Project Name: Durst Drive Warehouse
Road Name: Cedar Av. | Job Number: 14014
Road Segment: n/o Merill Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,899	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,034	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	96.85%
Medium Trucks:	84.8%	4.9%	10.3%	2.35%
Heavy Trucks:	86.5%	2.7%	10.8%	0.80%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.11	-0.75	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.04	-0.73	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-19.71	-0.73	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.6	66.9	65.2	59.1	67.7	68.3
Medium Trucks:	62.5	62.2	55.8	54.3	62.7	63.0
Heavy Trucks:	62.6	62.4	53.4	54.6	63.0	63.1
Vehicle Noise:	69.7	69.2	65.9	61.4	69.9	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	59	127	275	592
CNEL:	63	136	294	633

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EA 2023 | Project Name: Durst Drive Warehouse
Road Name: Cedar Av. | Job Number: 14014
Road Segment: n/o Merill Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,854	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,106	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	60.0	feet
Centerline Dist. to Observer:	60.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.27	-0.75	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.87	-0.73	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-20.68	-0.73	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.8	67.1	65.3	59.3	67.9	68.5
Medium Trucks:	62.6	62.4	56.0	54.4	62.9	63.1
Heavy Trucks:	61.6	61.4	52.4	53.6	62.0	62.1
Vehicle Noise:	69.7	69.2	66.0	61.3	69.9	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	59	127	273	588
CNEL:	63	136	293	630

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAC 2023 | Project Name: Durst Drive Warehouse
Road Name: Cedar Av. | Job Number: 14014
Road Segment: n/o Merill Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,659	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,318	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	60.0	feet
Centerline Dist. to Observer:	60.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.68	-0.75	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.46	-0.73	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-20.26	-0.73	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.2	67.5	65.7	59.7	68.3	68.9
Medium Trucks:	63.1	62.8	56.4	54.9	63.3	63.6
Heavy Trucks:	62.1	61.8	52.8	54.1	62.4	62.5
Vehicle Noise:	70.1	69.6	66.4	61.7	70.3	70.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	63	135	291	627
CNEL:	67	145	312	672

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAP 2023 | Project Name: Durst Drive Warehouse
Road Name: Cedar Av. | Job Number: 14014
Road Segment: n/o Merill Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,980	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,115	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	60.0	feet
Centerline Dist. to Observer:	60.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	96.85%
Medium Trucks:	84.8%	4.9%	10.3%	2.35%
Heavy Trucks:	86.5%	2.7%	10.8%	0.79%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.28	-0.75	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.87	-0.73	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-19.58	-0.73	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.8	67.1	65.3	59.3	67.9	68.5
Medium Trucks:	62.7	62.4	56.0	54.5	62.9	63.1
Heavy Trucks:	62.7	62.5	53.5	54.7	63.1	63.2
Vehicle Noise:	69.9	69.4	66.1	61.5	70.1	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	61	131	282	607
CNEL:	65	140	301	649

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAPC 2023 | Project Name: Durst Drive Warehouse
Road Name: Cedar Av. | Job Number: 14014
Road Segment: n/o Merill Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,774	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,327	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	60.0	feet
Centerline Dist. to Observer:	60.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.03%
Medium Trucks:	84.8%	4.9%	10.3%	2.35%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.70	-0.75	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.46	-0.73	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-20.26	-0.73	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.2	67.5	65.8	59.7	68.3	68.9
Medium Trucks:	63.1	62.8	56.4	54.9	63.3	63.6
Heavy Trucks:	62.1	61.8	52.8	54.1	62.4	62.5
Vehicle Noise:	70.1	69.6	66.4	61.7	70.3	70.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	63	135	291	628
CNEL:	67	145	312	673

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E | Project Name: Durst Drive Warehouse
Road Name: Cedar Av. | Job Number: 14014
Road Segment: s/o Merill Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,344	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	1,765	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	60.0	feet
Centerline Dist. to Observer:	60.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.50	-0.75	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.64	-0.73	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-21.45	-0.73	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.0	66.3	64.6	58.5	67.1	67.7
Medium Trucks:	61.9	61.6	55.2	53.7	62.1	62.4
Heavy Trucks:	60.9	60.7	51.6	52.9	61.2	61.4
Vehicle Noise:	68.9	68.4	65.2	60.6	69.1	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	113	242	522
CNEL:	56	121	260	560

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EA 2023 | Project Name: Durst Drive Warehouse
Road Name: Cedar Av. | Job Number: 14014
Road Segment: s/o Merill Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,288	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	1,836	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	60.0	feet
Centerline Dist. to Observer:	60.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.67	-0.75	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.47	-0.73	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-21.27	-0.73	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.2	66.5	64.7	58.7	67.3	67.9
Medium Trucks:	62.0	61.8	55.4	53.8	62.3	62.5
Heavy Trucks:	61.0	60.8	51.8	53.1	61.4	61.5
Vehicle Noise:	69.1	68.6	65.4	60.7	69.3	69.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	54	116	249	536
CNEL:	58	124	267	575

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E+P | Project Name: Durst Drive Warehouse
Road Name: Cedar Av. | Job Number: 14014
Road Segment: s/o Merill Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,512	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	1,778	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	60.0	feet
Centerline Dist. to Observer:	60.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	96.75%
Medium Trucks:	84.8%	4.9%	10.3%	2.35%
Heavy Trucks:	86.5%	2.7%	10.8%	0.90%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.52	-0.75	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.63	-0.73	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-19.81	-0.73	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.0	66.3	64.6	58.5	67.1	67.8
Medium Trucks:	61.9	61.6	55.2	53.7	62.1	62.4
Heavy Trucks:	62.5	62.3	53.3	54.5	62.9	63.0
Vehicle Noise:	69.2	68.7	65.3	60.9	69.4	69.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	55	118	255	549
CNEL:	59	127	273	587

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAP 2023 | Project Name: Durst Drive Warehouse
Road Name: Cedar Av. | Job Number: 14014
Road Segment: s/o Merill Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,456	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	1,849	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	60.0	feet
Centerline Dist. to Observer:	60.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	96.76%
Medium Trucks:	84.8%	4.9%	10.3%	2.35%
Heavy Trucks:	86.5%	2.7%	10.8%	0.89%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.69	-0.75	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.46	-0.73	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-19.69	-0.73	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.2	66.5	64.7	58.7	67.3	67.9
Medium Trucks:	62.1	61.8	55.4	53.9	62.3	62.6
Heavy Trucks:	62.6	62.4	53.4	54.6	63.0	63.1
Vehicle Noise:	69.4	68.9	65.5	61.1	69.6	70.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	56	121	261	563
CNEL:	60	130	279	602

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAC 2023 | *Project Name:* Durst Drive Warehouse
Road Name: Cedar Av. | *Job Number:* 14014
Road Segment: s/o Merill Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,664	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,167	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	60.0	feet
Centerline Dist. to Observer:	60.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.39	-0.75	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-14.75	-0.73	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-20.56	-0.73	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.9	67.2	65.4	59.4	68.0	68.6
Medium Trucks:	62.8	62.5	56.1	54.6	63.0	63.3
Heavy Trucks:	61.8	61.6	52.5	53.8	62.1	62.3
Vehicle Noise:	69.8	69.3	66.1	61.4	70.0	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	60	129	278	599
CNEL:	64	138	298	643

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E | *Project Name:* Durst Drive Warehouse
Road Name: Cedar Av. | *Job Number:* 14014
Road Segment: s/o I-10 EB

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,242	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,362	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	52.0	feet
Centerline Dist. to Observer:	52.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	46.400
Medium Trucks:	46.209
Heavy Trucks:	46.228

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	2.28	0.38	-1.20	*-4.66*	0.000	0.000
Medium Trucks:	77.72	-13.86	0.41	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-19.67	0.41	-1.20	*-5.41*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.0	67.3	65.5	59.5	68.1	68.7
Medium Trucks:	63.1	62.8	56.4	54.9	63.3	63.6
Heavy Trucks:	62.5	62.3	53.3	54.5	62.9	63.0
Vehicle Noise:	70.0	69.5	66.2	61.7	70.2	70.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	54	116	250	538
CNEL:	58	124	268	577

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAPC 2023 | *Project Name:* Durst Drive Warehouse
Road Name: Cedar Av. | *Job Number:* 14014
Road Segment: s/o Merill Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,905	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,185	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	60.0	feet
Centerline Dist. to Observer:	60.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.04%
Medium Trucks:	84.8%	4.9%	10.3%	2.34%
Heavy Trucks:	86.5%	2.7%	10.8%	0.61%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	55.218
Medium Trucks:	55.057
Heavy Trucks:	55.073

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.43	-0.75	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-14.75	-0.73	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-20.56	-0.73	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.9	67.3	65.5	59.4	68.1	68.7
Medium Trucks:	62.8	62.5	56.1	54.6	63.0	63.3
Heavy Trucks:	61.8	61.6	52.5	53.8	62.1	62.3
Vehicle Noise:	69.8	69.3	66.2	61.5	70.0	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	60	130	279	601
CNEL:	64	139	299	645

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E+P | *Project Name:* Durst Drive Warehouse
Road Name: Cedar Av. | *Job Number:* 14014
Road Segment: s/o I-10 EB

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,326	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,368	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	52.0	feet
Centerline Dist. to Observer:	52.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	96.92%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.72%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	46.400
Medium Trucks:	46.209
Heavy Trucks:	46.228

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	2.28	0.38	-1.20	*-4.66*	0.000	0.000
Medium Trucks:	77.72	-13.86	0.41	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-18.98	0.41	-1.20	*-5.41*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.0	67.3	65.5	59.5	68.1	68.7
Medium Trucks:	63.1	62.8	56.4	54.9	63.3	63.6
Heavy Trucks:	63.2	63.0	54.0	55.2	63.6	63.7
Vehicle Noise:	70.2	69.7	66.3	61.8	70.4	70.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	55	119	255	550
CNEL:	59	127	273	588

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EA 2023 | *Project Name:* Durst Drive Warehouse
Road Name: Cedar Av. | *Job Number:* 14014
Road Segment: s/o I-10 EB

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,504	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,457	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	52.0 feet
Centerline Dist. to Observer:	52.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	46.400
Medium Trucks:	46.209
Heavy Trucks:	46.228

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	2.45	0.38	-1.20	*-4.66*	0.000	0.000
Medium Trucks:	77.72	-13.69	0.41	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-19.50	0.41	-1.20	*-5.41*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.1	67.5	65.7	59.6	68.3	68.9
Medium Trucks:	63.2	62.9	56.6	55.0	63.5	63.7
Heavy Trucks:	62.7	62.5	53.5	54.7	63.1	63.2
Vehicle Noise:	70.2	69.7	66.4	61.9	70.4	70.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	55	119	257	553
CNEL:	59	128	275	592

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAC 2023 | *Project Name:* Durst Drive Warehouse
Road Name: Cedar Av. | *Job Number:* 14014
Road Segment: s/o I-10 EB

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	55,548	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	4,199	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	52.0 feet
Centerline Dist. to Observer:	52.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	46.400
Medium Trucks:	46.209
Heavy Trucks:	46.228

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	4.77	0.38	-1.20	*-4.66*	0.000	0.000
Medium Trucks:	77.72	-11.36	0.41	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-17.17	0.41	-1.20	*-5.41*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.5	69.8	68.0	62.0	70.6	71.2
Medium Trucks:	65.6	65.3	58.9	57.4	65.8	66.1
Heavy Trucks:	65.0	64.8	55.8	57.0	65.4	65.5
Vehicle Noise:	72.5	72.0	68.7	64.2	72.7	73.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	79	170	367	790
CNEL:	85	182	393	846

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAP 2023 | *Project Name:* Durst Drive Warehouse
Road Name: Cedar Av. | *Job Number:* 14014
Road Segment: s/o I-10 EB

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,588	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	2,464	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	52.0 feet
Centerline Dist. to Observer:	52.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	96.92%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.72%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	46.400
Medium Trucks:	46.209
Heavy Trucks:	46.228

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	2.45	0.38	-1.20	*-4.66*	0.000	0.000
Medium Trucks:	77.72	-13.69	0.41	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-18.84	0.41	-1.20	*-5.41*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.1	67.5	65.7	59.6	68.3	68.9
Medium Trucks:	63.2	62.9	56.6	55.0	63.5	63.7
Heavy Trucks:	63.4	63.2	54.1	55.4	63.7	63.9
Vehicle Noise:	70.3	69.8	66.5	62.0	70.5	71.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	56	122	262	564
CNEL:	60	130	280	603

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAPC 2023 | *Project Name:* Durst Drive Warehouse
Road Name: Cedar Av. | *Job Number:* 14014
Road Segment: s/o I-10 EB

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	56,088	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	4,240	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	48	feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	52.0 feet
Centerline Dist. to Observer:	52.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	96.51%
Medium Trucks:	84.8%	4.9%	10.3%	2.35%
Heavy Trucks:	86.5%	2.7%	10.8%	1.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	46.400
Medium Trucks:	46.209
Heavy Trucks:	46.228

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	4.79	0.38	-1.20	*-4.66*	0.000	0.000
Medium Trucks:	77.72	-11.34	0.41	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-14.46	0.41	-1.20	*-5.41*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.5	69.8	68.0	62.0	70.6	71.2
Medium Trucks:	65.6	65.3	58.9	57.4	65.8	66.1
Heavy Trucks:	67.7	67.5	58.5	59.7	68.1	68.2
Vehicle Noise:	73.2	72.7	69.0	64.9	73.4	73.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	87	188	406	874
CNEL:	93	200	432	930

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E | Project Name: Durst Drive Warehouse
Road Name: Merill Av. | Job Number: 14014
Road Segment: w/o Cedar Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,727	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	962	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	44.0	feet
Centerline Dist. to Observer:	44.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-2.14	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	79.45	-18.28	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-24.08	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.4	65.7	63.9	57.9	66.5	67.1
Medium Trucks:	61.3	61.0	54.6	53.1	61.5	61.8
Heavy Trucks:	60.3	60.1	51.0	52.3	60.6	60.8
Vehicle Noise:	68.3	67.8	64.6	60.0	68.5	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	75	162	349
CNEL:	37	81	174	375

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EA 2023 | Project Name: Durst Drive Warehouse
Road Name: Merill Av. | Job Number: 14014
Road Segment: w/o Cedar Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,241	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	1,001	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	44.0	feet
Centerline Dist. to Observer:	44.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.96	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	79.45	-18.10	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-23.91	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.6	65.9	64.1	58.1	66.7	67.3
Medium Trucks:	61.5	61.2	54.8	53.3	61.7	62.0
Heavy Trucks:	60.5	60.2	51.2	52.5	60.8	60.9
Vehicle Noise:	68.5	68.0	64.8	60.1	68.7	69.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	36	77	166	359
CNEL:	38	83	179	385

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E+P | Project Name: Durst Drive Warehouse
Road Name: Merill Av. | Job Number: 14014
Road Segment: w/o Cedar Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,895	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	975	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	44.0	feet
Centerline Dist. to Observer:	44.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	96.53%
Medium Trucks:	84.8%	4.9%	10.3%	2.34%
Heavy Trucks:	86.5%	2.7%	10.8%	1.13%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-2.10	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	79.45	-18.26	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-21.43	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.4	65.8	64.0	57.9	66.6	67.2
Medium Trucks:	61.3	61.0	54.6	53.1	61.6	61.8
Heavy Trucks:	62.9	62.7	53.7	54.9	63.3	63.4
Vehicle Noise:	68.9	68.4	64.8	60.6	69.1	69.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	38	82	177	382
CNEL:	41	88	189	407

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAP 2023 | Project Name: Durst Drive Warehouse
Road Name: Merill Av. | Job Number: 14014
Road Segment: w/o Cedar Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,409	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	1,014	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	44.0	feet
Centerline Dist. to Observer:	44.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	96.55%
Medium Trucks:	84.8%	4.9%	10.3%	2.34%
Heavy Trucks:	86.5%	2.7%	10.8%	1.11%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.93	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	79.45	-18.09	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-21.34	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.6	65.9	64.2	58.1	66.7	67.3
Medium Trucks:	61.5	61.2	54.8	53.3	61.7	62.0
Heavy Trucks:	63.0	62.8	53.8	55.0	63.4	63.5
Vehicle Noise:	69.0	68.5	65.0	60.7	69.2	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	39	84	181	391
CNEL:	42	90	194	417

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAC 2023 | Project Name: Durst Drive Warehouse
Road Name: Merill Av. | Job Number: 14014
Road Segment: w/o Cedar Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,037	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	1,061	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.71	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	79.45	-17.85	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-23.66	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.8	66.1	64.4	58.3	66.9	67.5
Medium Trucks:	61.7	61.4	55.1	53.5	62.0	62.2
Heavy Trucks:	60.7	60.5	51.5	52.7	61.1	61.2
Vehicle Noise:	68.7	68.2	65.0	60.4	68.9	69.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	37	80	173	373
CNEL:	40	86	186	400

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E | Project Name: Durst Drive Warehouse
Road Name: Merill Av. | Job Number: 14014
Road Segment: e/o Cedar Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,741	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	963	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-2.13	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	79.45	-18.27	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-24.08	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.4	65.7	64.0	57.9	66.5	67.1
Medium Trucks:	61.3	61.0	54.6	53.1	61.6	61.8
Heavy Trucks:	60.3	60.1	51.0	52.3	60.6	60.8
Vehicle Noise:	68.3	67.8	64.6	60.0	68.5	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	75	162	349
CNEL:	37	81	174	375

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAPC 2023 | Project Name: Durst Drive Warehouse
Road Name: Merill Av. | Job Number: 14014
Road Segment: w/o Cedar Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,047	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	1,062	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.71	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	79.45	-17.85	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-23.66	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.8	66.1	64.4	58.3	66.9	67.6
Medium Trucks:	61.7	61.4	55.1	53.5	62.0	62.2
Heavy Trucks:	60.7	60.5	51.5	52.7	61.1	61.2
Vehicle Noise:	68.7	68.2	65.1	60.4	68.9	69.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	37	80	173	373
CNEL:	40	86	186	400

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E+P | Project Name: Durst Drive Warehouse
Road Name: Merill Av. | Job Number: 14014
Road Segment: e/o Cedar Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,270	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	1,003	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.53%
Medium Trucks:	84.8%	4.9%	10.3%	2.30%
Heavy Trucks:	86.5%	2.7%	10.8%	2.17%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-2.02	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	79.45	-18.21	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-18.46	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.5	65.8	64.1	58.0	66.6	67.2
Medium Trucks:	61.4	61.1	54.7	53.2	61.6	61.8
Heavy Trucks:	65.9	65.7	56.7	57.9	66.3	66.4
Vehicle Noise:	69.9	69.5	65.2	61.6	70.1	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	45	97	208	448
CNEL:	47	102	220	474

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EA 2023 | *Project Name:* Durst Drive Warehouse
Road Name: Merill Av. | *Job Number:* 14014
Road Segment: e/o Cedar Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,256	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	1,002	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	44.0	feet
Centerline Dist. to Observer:	44.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.96	1.28	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	79.45	-18.10	1.31	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-23.90	1.31	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.6	65.9	64.1	58.1	66.7	67.3
Medium Trucks:	61.5	61.2	54.8	53.3	61.7	62.0
Heavy Trucks:	60.5	60.2	51.2	52.5	60.8	60.9
Vehicle Noise:	68.5	68.0	64.8	60.1	68.7	69.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	36	77	167	359
CNEL:	38	83	179	385

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAC 2023 | *Project Name:* Durst Drive Warehouse
Road Name: Merill Av. | *Job Number:* 14014
Road Segment: e/o Cedar Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,051	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	1,062	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	44.0	feet
Centerline Dist. to Observer:	44.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.71	1.28	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	79.45	-17.85	1.31	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-23.65	1.31	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.8	66.1	64.4	58.3	66.9	67.6
Medium Trucks:	61.7	61.4	55.1	53.5	62.0	62.2
Heavy Trucks:	60.7	60.5	51.5	52.7	61.1	61.2
Vehicle Noise:	68.7	68.2	65.1	60.4	68.9	69.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	37	80	173	373
CNEL:	40	86	186	400

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAP 2023 | *Project Name:* Durst Drive Warehouse
Road Name: Merill Av. | *Job Number:* 14014
Road Segment: e/o Cedar Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,785	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	1,042	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	44.0	feet
Centerline Dist. to Observer:	44.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	95.59%
Medium Trucks:	84.8%	4.9%	10.3%	2.30%
Heavy Trucks:	86.5%	2.7%	10.8%	2.11%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.85	1.28	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	79.45	-18.04	1.31	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-18.42	1.31	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.7	66.0	64.2	58.2	66.8	67.4
Medium Trucks:	61.5	61.2	54.9	53.3	61.8	62.0
Heavy Trucks:	65.9	65.7	56.7	58.0	66.3	66.4
Vehicle Noise:	70.0	69.6	65.3	61.7	70.2	70.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	46	98	212	456
CNEL:	48	104	224	483

Friday, December 24, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: EAPC 2023 | *Project Name:* Durst Drive Warehouse
Road Name: Merill Av. | *Job Number:* 14014
Road Segment: e/o Cedar Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,061	vehicles
Peak Hour Percentage:	7.56%	
Peak Hour Volume:	1,063	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	44.0	feet
Centerline Dist. to Observer:	44.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.02%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	0.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.70	1.28	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	79.45	-17.85	1.31	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-23.65	1.31	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.8	66.1	64.4	58.3	67.0	67.6
Medium Trucks:	61.7	61.4	55.1	53.5	62.0	62.2
Heavy Trucks:	60.7	60.5	51.5	52.7	61.1	61.2
Vehicle Noise:	68.7	68.2	65.1	60.4	68.9	69.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	37	80	173	373
CNEL:	40	86	186	400

Friday, December 24, 2021

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APPENDIX 9.1:

CADNAA OPERATIONAL NOISE MODEL INPUTS

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14014 - Durst Drive Warehouse

CadnaA Noise Prediction Model: 14014_02.cna
Date: 23.12.21
Analyst: S. Shami

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (RLS-90)	
Strictly acc. to RLS-90	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	45.1	44.1	50.5	55.0	45.0	0.0				5.00	a	6214776.31	2345802.91	5.00
RECEIVERS		R2	45.3	44.3	50.7	55.0	45.0	0.0				5.00	a	6215974.58	2345746.87	5.00
RECEIVERS		R3	43.5	42.5	48.9	55.0	45.0	0.0				5.00	a	6214815.60	2342925.42	5.00
RECEIVERS		R4	32.1	31.0	37.4	55.0	45.0	0.0				5.00	a	6213166.48	2344019.09	5.00
RECEIVERS		R5	37.2	36.2	42.6	55.0	45.0	0.0				5.00	a	6214396.52	2342912.70	5.00

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			K0	Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night				X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(dB)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		TRASH01	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	0.0	5.00	a	6215210.93	2344276.58	5.00
POINTSOURCE		AC01	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	0.0	5.00	g	6214726.26	2343854.86	50.00
POINTSOURCE		AC02	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	0.0	5.00	g	6214725.70	2344234.03	50.00
POINTSOURCE		PARK01	87.8	87.8	87.8	Lw	87.8		900.00	0.00	540.00	0.0	5.00	a	6214631.89	2343817.05	5.00
POINTSOURCE		PARK02	87.8	87.8	87.8	Lw	87.8		900.00	0.00	540.00	0.0	5.00	a	6214633.21	2343923.26	5.00
POINTSOURCE		PARK03	87.8	87.8	87.8	Lw	87.8		900.00	0.00	540.00	0.0	5.00	a	6214634.64	2344007.54	5.00
POINTSOURCE		PARK04	87.8	87.8	87.8	Lw	87.8		900.00	0.00	540.00	0.0	5.00	a	6214633.88	2344105.99	5.00
POINTSOURCE		PARK05	87.8	87.8	87.8	Lw	87.8		900.00	0.00	540.00	0.0	5.00	a	6214634.84	2344220.00	5.00

Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src				Height
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number			Speed	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)
LINESOURCE		TRUCK01	93.2	93.2	93.2	76.8	76.8	76.8	Lw	93.2		900.00	0.00	540.00					8
LINESOURCE		TRUCK02	93.2	93.2	93.2	70.6	70.6	70.6	Lw	93.2		900.00	0.00	540.00					8

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
LINESOURCE	8.00	a			6215156.73	2343869.26	8.00	0.00
					6215153.32	2343760.05	8.00	0.00
					6215159.24	2343725.22	8.00	0.00
LINESOURCE	8.00	a			6215144.76	2344309.65	8.00	0.00
					6215145.33	2344342.79	8.00	0.00
					6214685.50	2344337.59	8.00	0.00
					6214669.95	2344332.16	8.00	0.00
					6214655.97	2344323.45	8.00	0.00
					6214643.60	2344313.89	8.00	0.00
					6214631.34	2344310.85	8.00	0.00
					6214588.72	2344309.93	8.00	0.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)
AREASOURCE		DOCK01	111.5	111.5	111.5	72.7	72.7	72.7	Lw	111.5		900.00	0.00	540.00	8

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
AREASOURCE	8.00	a			6215049.06	2344310.91	8.00	0.00
					6215175.47	2344309.24	8.00	0.00
					6215175.30	2344299.67	8.00	0.00
					6215234.89	2344298.66	8.00	0.00
					6215231.63	2343869.14	8.00	0.00
					6215106.21	2343869.35	8.00	0.00
					6215044.93	2343870.39	8.00	0.00

Barrier(s)

Name	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
			left	right		horz.	vert.	Begin	End	x	y	z	Ground
					(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Building(s)

Name	M.	ID	RB	Residents	Absorption	Height		Coordinates			
						Begin		x	y	z	Ground
						(ft)		(ft)	(ft)	(ft)	(ft)
BUILDING		BUILDING00001	x	0		45.00	a	6214709.55	2344312.86	45.00	0.00
								6215049.06	2344310.91	45.00	0.00
								6215044.93	2343870.39	45.00	0.00
								6215106.21	2343869.35	45.00	0.00
								6215104.56	2343772.16	45.00	0.00
								6214719.54	2343773.43	45.00	0.00
								6214720.14	2343780.61	45.00	0.00
								6214680.39	2343780.80	45.00	0.00
								6214680.57	2343819.59	45.00	0.00
								6214672.89	2343818.77	45.00	0.00
								6214676.50	2344255.95	45.00	0.00
								6214684.64	2344256.29	45.00	0.00
								6214682.90	2344294.63	45.00	0.00
								6214710.20	2344294.65	45.00	0.00

APPENDIX 10.1:

CADNAA CONSTRUCTION NOISE MODEL INPUTS

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14014 - Durst Drive Warehouse

CadnaA Noise Prediction Model: 14014_02 - Construction.cna
Date: 23.12.21
Analyst: S. Shami

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (RLS-90)	
Strictly acc. to RLS-90	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	48.2	48.2	54.9	55.0	45.0	0.0				5.00	a	6214776.31	2345802.91	5.00
RECEIVERS		R2	47.0	47.0	53.7	55.0	45.0	0.0				5.00	a	6215974.58	2345746.87	5.00
RECEIVERS		R3	52.5	52.5	59.1	55.0	45.0	0.0				5.00	a	6214815.60	2342925.42	5.00
RECEIVERS		R4	48.3	48.3	55.0	55.0	45.0	0.0				5.00	a	6213166.48	2344019.09	5.00
RECEIVERS		R5	51.5	51.5	58.2	55.0	45.0	0.0				5.00	a	6214396.52	2342912.70	5.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	
SITEBOUNDARY		CONSTRUCTION	115.0	115.0	115.0	69.2	69.2	69.2	Lw	115					8

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
SITEBOUNDARY	8.00	a			6214589.04	2344354.47	8.00	0.00
					6215235.41	2344366.85	8.00	0.00
					6215230.38	2343724.34	8.00	0.00
					6215204.57	2343724.54	8.00	0.00
					6215108.50	2343725.98	8.00	0.00
					6214608.27	2343729.14	8.00	0.00

Name	Height		Coordinates			
	Begin	End	x	y	z	Ground
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
			6214595.40	2343730.04	8.00	0.00
			6214589.84	2343732.54	8.00	0.00
			6214584.38	2343735.01	8.00	0.00
			6214584.44	2343743.51	8.00	0.00
			6214584.68	2343755.24	8.00	0.00

APPENDIX 10.2:

CADNAA NIGHTTIME CONCRETE POUR CONSTRUCTION NOISE MODEL INPUTS

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14014 - Durst Drive Warehouse

CadnaA Noise Prediction Model: 14014_02 - Nighttime Concrete Pour.cna
Date: 23.12.21
Analyst: S. Shami

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (RLS-90)	
Strictly acc. to RLS-90	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	48.2	48.2	54.9	55.0	45.0	0.0				5.00	a	6214776.31	2345802.91	5.00
RECEIVERS		R2	46.8	46.8	53.5	55.0	45.0	0.0				5.00	a	6215974.58	2345746.87	5.00
RECEIVERS		R3	52.5	52.5	59.2	55.0	45.0	0.0				5.00	a	6214815.60	2342925.42	5.00
RECEIVERS		R4	48.5	48.5	55.2	55.0	45.0	0.0				5.00	a	6213166.48	2344019.09	5.00
RECEIVERS		R5	51.7	51.7	58.3	55.0	45.0	0.0				5.00	a	6214396.52	2342912.70	5.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	
BUILDING		CONCRETE POUR	115.0	115.0	115.0	72.2	72.2	72.2	Lw	115					8

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
BUILDING	8.00	a			6214709.55	2344312.86	8.00	0.00
					6215049.06	2344310.91	8.00	0.00
					6215044.93	2343870.39	8.00	0.00
					6215106.21	2343869.35	8.00	0.00
					6215104.56	2343772.16	8.00	0.00
					6214719.54	2343773.43	8.00	0.00

Name	Height		Coordinates			
	Begin	End	x	y	z	Ground
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
			6214720.14	2343780.61	8.00	0.00
			6214680.39	2343780.80	8.00	0.00
			6214680.57	2343819.59	8.00	0.00
			6214672.89	2343818.77	8.00	0.00
			6214676.50	2344255.95	8.00	0.00
			6214684.64	2344256.29	8.00	0.00
			6214682.90	2344294.63	8.00	0.00
			6214710.20	2344294.65	8.00	0.00

Durst Drive Warehouse

(APN No. 1280-622-5, -6, -7)

Traffic Analysis

City of Rialto

Prepared by:

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March 17, 2022

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
APN	Assessor's Parcel Number
CA MUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
DIF	Development Impact Fee
EAP	Existing Ambient Growth plus Project
EAPC	Existing Ambient Growth plus Project Plus Cumulative
GHG	Greenhouse Gas
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	Level of Service
OPR	Office of Planning and Research
PCE	Passenger Car Equivalents
PHF	Peak Hour Factor
Project	Durst Drive Warehouse
RTP	Regional Transportation Plan
SBCTA	San Bernardino County Transportation Authority
SCS	Sustainable Communities Strategy
sf	Square Feet
TA	Traffic Analysis
v/c	Volume to Capacity
VMT	Vehicle Miles Traveled
vphgpl	Vehicles per Hour Green per Lane

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1 SUMMARY OF FINDINGS

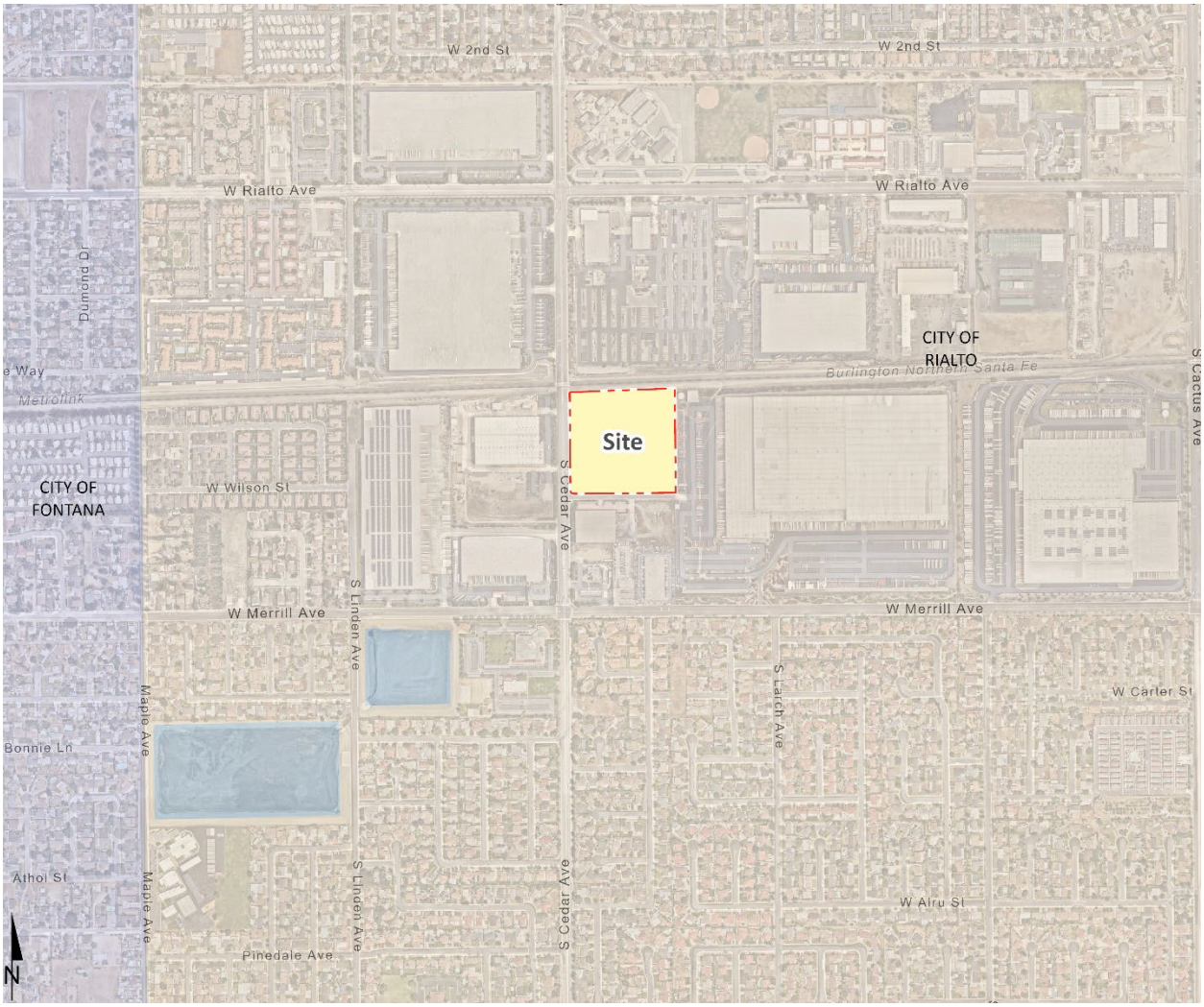
This report presents the results of the traffic analysis (TA) for the proposed Durst Drive Warehouse ("Project"), which is located at 1230 West Durst Drive in the City of Rialto, which is directly adjacent to a City identified truck route on Cedar Avenue. The Project's location in relation to the surrounding area is shown on Exhibit 1-1.

The purpose of this TA is to evaluate the potential circulation system deficiencies that may result from the development of the proposed Project, and where necessary recommend improvements to achieve acceptable operations consistent with General Plan level of service goals and policies. This TA has been prepared in accordance with the City of Rialto's Traffic Impact Analysis Report Guidelines and Requirements, County of San Bernardino Transportation Impact Study Guidelines (dated July 9, 2019), San Bernardino County Congestion Management Program (CMP) Guidelines for CMP Traffic Impact Analysis Reports (Appendix B, 2016 Update), and consultation with City staff during the TA scoping process. (1) (2) (3) The City approved Project Traffic Study Scoping agreement is provided in Appendix 1.1 of this TA.

1.1 SUMMARY OF FINDINGS – VEHICLE MILES TRAVELED AND LEVEL OF SERVICE

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which require all lead agencies to adopt Vehicle Miles Traveled (VMT) as a replacement for automobile delay-based level of service (LOS) as the new measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020. To aid in the transition from LOS to VMT, the Governor's Office of Planning and Research (OPR) published its Technical Advisory on Evaluating Transportation Impacts in CEQA (**Technical Advisory**). (4) Based on OPR's Technical Advisory, the County of San Bernardino has recently adopted their San Bernardino County Transportation Impact Study Guidelines (July 2019) (**County Guidelines**) (5). It is our understanding that the City of Rialto is currently in development of VMT analysis guidelines and impact thresholds, therefore, County Guidelines are to be utilized until such time the City formally adopts their own. The VMT analysis has been reviewed and approved by City staff (see Appendix 1.2).

EXHIBIT 1-1: LOCATION MAP



The Project is to construct the following improvements as design features in conjunction with development of the site:

- Project to construct both driveways on Cedar Avenue with stop controls for egress traffic from the Project with free flow traffic along Cedar Avenue.
- Project to construct a driveway on Durst Drive with stop controls for egress traffic from the Project with free flow traffic along Durst Drive Avenue.
- Project to construct the easterly terminus of Durst Drive to City standards to accommodate an adequate turnaround.

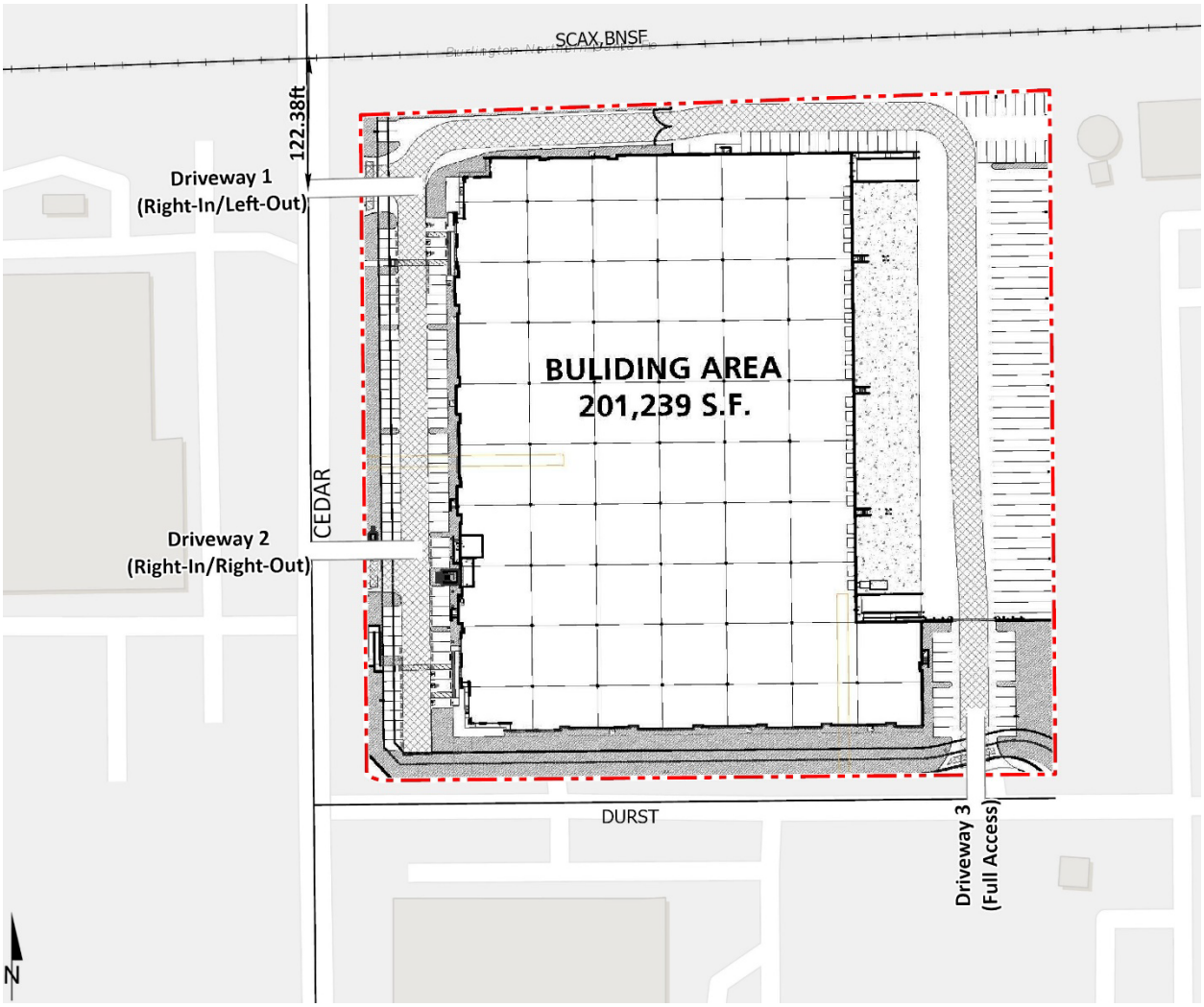
Additional details and intersection lane geometrics are provided in Section 1.6 *Recommendations* of this report.

The development of the proposed Project is not anticipated to require the construction of any off-site improvements, however, there are improvement needs identified at off-site intersections for future traffic analysis scenarios where the Project would contribute traffic (as measured by 50 or more peak hour trips). As such, the Project Applicant's responsibility for the Project's contributions towards off-site intersection deficiencies is fulfilled through payment of fair share or participation in the pre-existing fee programs that would be assigned to construction of the identified recommended improvements. The Project Applicant would be required to pay requisite fair share contributions and fee payments consistent with the County's requirements (see Section 7 *Local and Regional Funding Mechanisms*).

1.2 PROJECT OVERVIEW

Exhibit 1-2 illustrates the preliminary Project site plan. Although the current site plan reflects a total of 201,239 square feet of building space, the Project has evaluated the development of a single 235,000 square foot warehouse building which includes APNs 1280-622-5, -6, and -7. A higher square footage was evaluated in order to conduct a conservative analysis and overstate, as opposed to understate, potential traffic deficiencies. It is anticipated that the Project would be developed in a single phase with an anticipated Opening Year of 2023. Access to the Project site will be provided to Cedar Avenue via two proposed, limited-access driveways and to Durst Drive via one proposed full-access driveway which will serve both passenger cars and trucks. The northerly driveway on Cedar Avenue will be restricted to right-in/left-out access only for both passenger cars and trucks due to the proximity to the adjacent railroad track. The southerly driveway on Cedar Avenue will serve passenger cars only and will be restricted to right-in/right-out access only. Regional access to the Project site will be provided by the I-10 Freeway via Cedar Avenue.

EXHIBIT 1-2: PRELIMINARY SITE PLAN



Trips generated by the Project's proposed land uses have been estimated based on the trip generation trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (9th Edition, 2012) for Warehousing (ITE Land Use Code 150) were used. The vehicle and truck mix were sourced from the City of Rialto's Public Works Department's Traffic Impact Analysis Report Guidelines and Requirements (adopted February 4, 2014). Passenger car equivalent (PCE) factors were applied to the trip generation rates to convert trips made by heavy trucks (2-axle, 3-axle, and 4+-axle trucks) to PCE values. The proposed Project is anticipated to generate a total of 1,406 two-way passenger car equivalent (PCE) trips per day with 122 PCE AM peak hour trips and 130 PCE PM peak hour trips. The assumptions and methods used to estimate the Project's trip generation characteristics are discussed in greater detail in Section 4.1 *Project Trip Generation* of this report.

1.3 ANALYSIS SCENARIOS

For the purposes of this TA, potential deficiencies to traffic and circulation have been assessed for each of the following conditions:

- Existing (2021)
- Existing plus Ambient Growth plus Project (EAP) (2023)
- Existing plus Ambient Growth plus Project plus Cumulative (EAPC) (2023)

1.3.1 EXISTING (2021) CONDITIONS

Information for Existing (2021) conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared.

1.3.2 EAP (2023) CONDITIONS

The Existing plus Ambient Growth plus Project (EAP) conditions analysis determines traffic deficiencies that would occur on the existing roadway system with the addition of Project traffic. To account for background traffic growth, an ambient growth factor from Existing conditions of 4.04% is included for EAP (2023) traffic conditions (2% per year, compounded annually over 2 years). The ambient growth is consistent with the growth used by other projects in the area within the City of Rialto.

1.3.3 EAPC (2023) CONDITIONS

The Existing plus Ambient Growth plus Project plus Cumulative (EAPC) conditions analysis determines the potential near-term cumulative circulation system deficiencies. To account for background traffic growth, traffic associated with other known cumulative development projects in conjunction with an ambient growth factor from Existing conditions of 4.04% is included for EAPC (2023) traffic conditions. The ambient growth is consistent with the growth used by other projects in the area. This comprehensive list was compiled from information provided by the City of Rialto and other near-by agencies.

1.4 STUDY AREA

To ensure that this TA satisfies the City of Rialto's requirements, Urban Crossroads, Inc. prepared a project TA scoping package for review by City staff prior to the preparation of this report. The Agreement provides an outline of the Project study area, trip generation, trip distribution, and analysis methodology.

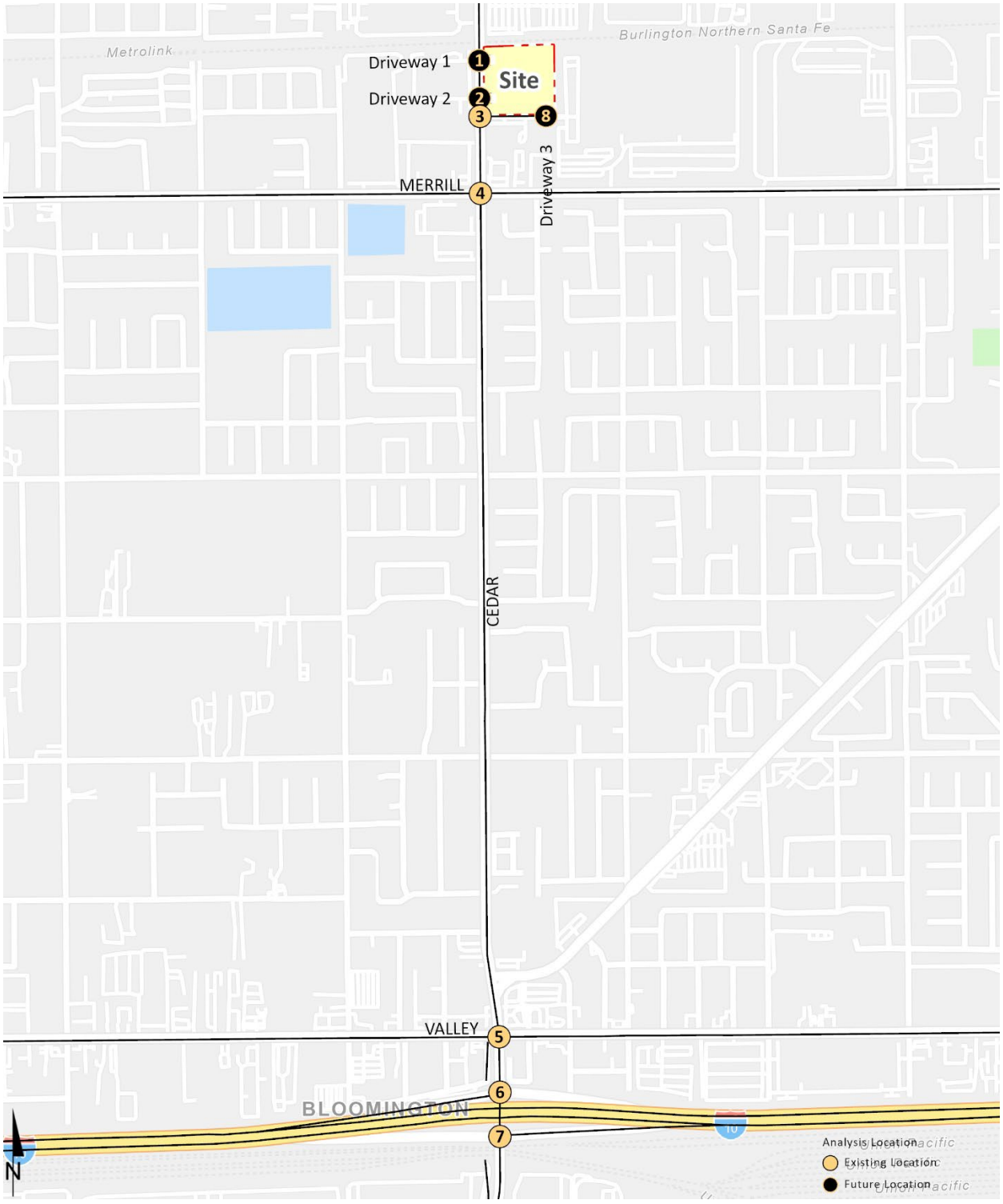
The following 8 study area intersections shown on Exhibit 1-2 and listed on Table 1-1 were selected for this TA based on consultation with City of Rialto staff. The "50 peak hour trip" criterion generally represents a minimum number of trips at which a typical intersection would have the potential to be affected by a given development proposal. Although each intersection may have unique operating characteristics, this traffic engineering rule of thumb is a widely utilized tool for estimating a potential area of influence (i.e., study area).

TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

ID	Intersection	Jurisdiction	CMP?
1	Cedar Av. & Driveway 1	Rialto	No
2	Cedar Av. & Driveway 2	Rialto	No
3	Cedar Av. & Durst Dr.	Rialto	No
4	Cedar Av. & Merrill Av.	Rialto	No
5	Cedar Av. & Valley Blvd.	County of San Bernardino	No
6	Cedar Av. & I-10 WB	County of San Bernardino, Caltrans	No
7	Cedar Av. & I-10 EB	County of San Bernardino, Caltrans	No
8	Driveway 3 & Durst Dr.	Rialto	No

The intent of a CMP is to more directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related deficiencies, and improve air quality. Counties within California have developed CMPs with varying methods and strategies to meet the intent of the CMP legislation. Study area intersections that are identified as CMP facilities in the County of San Bernardino per the SBCTA CMP are indicated on Table 1-1. (3)

EXHIBIT 1-3: STUDY AREA



1.5 DEFICIENCIES

This section provides a summary of deficiencies by analysis scenario. Section 2 *Methodologies* provides information on the methodologies used in the analysis and Section 5 *EAP (2023) Traffic Conditions* and Section 6 *EAPC (2023) Traffic* Conditions includes the detailed analysis. A summary of LOS results for all analysis scenarios is presented on Table 1-2.

TABLE 1-2: SUMMARY OF INTERSECTION LEVEL OF SERVICE BY ANALYSIS SCENARIO

#	Intersection	Existing		EAP (2023)		EAPC (2023)	
		AM	PM	AM	PM	AM	PM
1	Cedar Av. & Driveway 1	N/A	N/A	A-D	A-D	A-D	A-D
2	Cedar Av. & Driveway 2	N/A	N/A	A-D	A-D	A-D	A-D
3	Cedar Av. & Durst Dr.	A-D	A-D	A-D	E	A-D	F
4	Cedar Av. & Merrill Av.	A-D	A-D	A-D	A-D	A-D	A-D
5	Cedar Av. & Valley Blvd.	A-D	A-D	A-D	A-D	A-D	E
6	Cedar Av. & I-10 WB	A-D	A-D	A-D	A-D	F	F
7	Cedar Av. & I-10 EB	A-D	A-D	A-D	A-D	F	F
8	Driveway 3 & Durst Dr.	N/A	N/A	A-D	A-D	A-D	A-D

LOS=A-D LOS=E LOS=F

1.5.1 EAP (2023) CONDITIONS

Intersections

The following study area intersection is anticipated to operate at an unacceptable LOS during one or more peak hours under EAP (2023) traffic conditions:

- Cedar Avenue & Durst Drive (#3) – LOS E PM peak hour only

Off-Ramp Queues

There are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows for EAP (2023) traffic conditions, consistent with Existing (2021) traffic conditions.

1.5.2 EAPC (2023) CONDITIONS

Intersections

The following study area intersections are anticipated to operate at an unacceptable LOS under EAPC (2023) traffic conditions:

- Cedar Avenue & Durst Drive (#3) – LOS F PM peak hour only
- Cedar Avenue & Valley Blvd (#5) – LOS E PM peak hour only
- Cedar Avenue & I-10 Westbound Ramps (#6) – LOS F AM and PM peak hours
- Cedar Avenue & I-10 Eastbound Ramps (#7) – LOS F AM and PM peak hours

Off-Ramp Queues

There are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows under EAPC (2023) traffic conditions, consistent with Existing (2021) traffic conditions.

1.6 RECOMMENDATIONS

1.6.1 SITE ADJACENT AND SITE ACCESS RECOMMENDATIONS

The following recommendations are based on the improvements needed to accommodate site access. The site adjacent recommendations are shown on Exhibit 1-4. Queuing analysis results for the Project driveways and site adjacent intersection of Cedar Avenue and Durst Drive is provided in Appendix 1.3. No queuing issues are anticipated at the Project driveways based on the 95th percentile peak hour traffic flows under EAPC (2023) traffic conditions.

Recommendation 1.1 – ***Cedar Avenue & Driveway 1 (#1)*** – The following improvements are necessary to accommodate site access:

- Project to install a stop sign on the westbound approach and accommodate a westbound left turn lane. This driveway will be restricted to right-in and left-out access only and would serve both passenger cars and trucks.
- Project to modify the existing raised median to pull back the nose of the median by 25 feet from the southern in order to accommodate westbound left turn egress traffic.

Recommendation 2.1 – ***Cedar Avenue & Driveway 2 (#2)*** – The following improvements are necessary to accommodate site access:

- Project to install a stop sign on the westbound approach and accommodate a westbound right turn lane. This driveway will be restricted to right-in/right-out access and will only serve passenger cars.

Recommendation 3.1 – ***Cedar Av. & Durst Drive (#3)*** – The following improvements are necessary to accommodate site access:

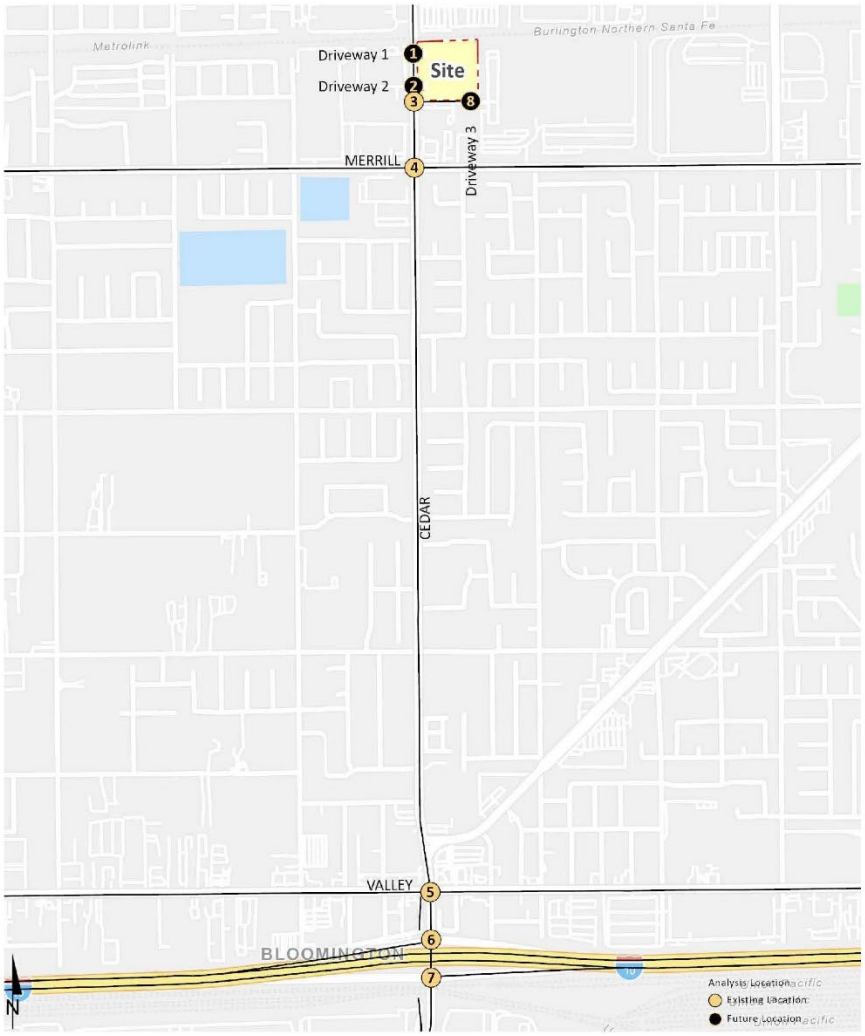
- No changes to the existing lane geometrics and traffic control.

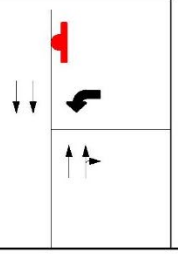
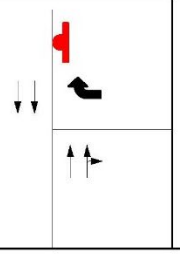
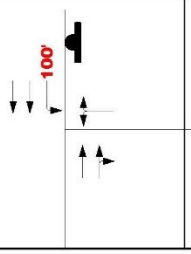
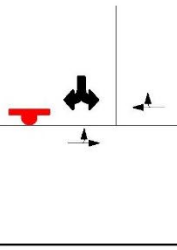
Recommendation 4.1 – ***Driveway 3 & Durst Drive (#8)*** – The following improvements are necessary to accommodate site access:

- Project to install a stop sign on the southbound approach and accommodate a southbound shared left-right turn lane. This driveway will allow full access and will serve both passenger cars and trucks.

On-site traffic signing and striping should be implemented agreeable with the provisions of the California Manual on Uniform Traffic Control Devices (CA MUTCD) and in conjunction with detailed construction plans for the Project site.

EXHIBIT 1-4: SITE ADJACENT ROADWAY AND SITE ACCESS RECOMMENDATIONS



1 Cedar Av. & Dwy. 1	2 Cedar Av. & Dwy. 2	3 Cedar Av. & Durst Dr.	8 Dwy. 3 & Durst Dr.
			

= *Stop Sign*
= *Stop Sign Improvement*
= *Existing Lane*
= *Lane Improvement*
100' = *Recommended Turn Pocket Length*

1.6.2 OFF-SITE RECOMMENDATIONS

The recommended improvements needed to address the cumulative deficiencies identified under EAPC (2023) traffic conditions are summarized in Table 1-3. For those improvements listed in Table 1-3 and not constructed as part of the Project, the Project Applicant's responsibility for the Project's contributions towards deficient intersections is fulfilled through payment of fees or fair share that would be assigned to construction of the identified recommended improvements.

Table 1-3 also summarizes the applicable cost associated with each of the recommended improvements based on the preliminary construction cost estimates found in Appendix G of the San Bernardino County CMP in conjunction with a cost escalation factor of 1.612 to reflect current costs. A rough order of magnitude cost has been prepared to determine the appropriate contribution value based upon the Project's fair share of traffic as part of the project approval process. Based on the Project fair share percentages, the Project's fair share cost is estimated at $170,258. These estimates are a rough order of magnitude only as they are intended only for disclosure purposes and do not imply any legal responsibility or formula for contributions or mitigation.

Recommendation 5.1 – Prior to the issuance of building permits, the Project Applicant shall pay the Project's fair share amount of $116,442 for the improvements at intersections located within the City and $48,581 for the improvements at intersections located within County of San Bernardino. The Developer's fair-share amount for the intersections that either share a mutual border with or are wholly located within the jurisdiction of Caltrans that have recommended improvements which are not covered by a pre-existing fee program is $5,235. Developer shall be required to pay the amount shown above to the City of Rialto prior to the issuance of building permits. The Project Applicant shall provide proof of direct payment of fair share contribution to both Caltrans and to the County of San Bernardino.

1.7 TRUCK ACCESS AND CIRCULATION

Due to the typical wide turning radius of large trucks, a truck turning template has been overlaid on the site plan at the Project driveways anticipated to be utilized by heavy trucks in order to determine appropriate curb radii and to verify that trucks will have sufficient space to execute turning maneuvers (see Exhibit 1-5). As shown on Exhibit 1-5, the proposed curb radii at Driveways 1 on Cedar Avenue and Driveway 3 on Durst Drive are anticipated to accommodate the ingress and egress of heavy trucks and currently designed.

TABLE 1-3: SUMMARY OF IMPROVEMENTS AND ROUGH ORDER OF MAGNITUDE COSTS

#	Intersection	Jurisdiction	Existing (2021)	EAP (2023)	EAPC (2023)	Improvements in City DIF or County DIF?[1]	Project Responsibility[2]	Total Cost[3,4]	Fair Share %[5]	Fair Share Cost[6]
3	Cedar Av. & Durst Dr.	City of Rialto	None	Install a traffic signal	Same	No	Fair Share	$600,000	19.4%	$116,442
							Total:	**$600,000**		**$116,442**
5	Cedar Av. & Valley Blvd	County of San Bernardino	None	None	Restripe a EB right turn lane as EB through lane	No	Fair Share	$40,300	6.3%	$2,541
					Restripe NB right turn lane as NB shared through-right lane		Fair Share	$40,300		$2,541
							Total:	**$80,600**		**$5,083**
6	Cedar Av. & I-10 WB Ramps	Caltrans, County of San Bernardino	None	None	Add a NB left turn lane	No	Fair Share	$858,000	3.6%	$30,666
							Total:	**$858,000**		**$30,666**
7	Cedar Av. & I-10 EB Ramps	Caltrans, County of San	None	None	Add a SB left turn lane	No	Fair Share	$858,000	1.5%	$12,832
					Add a EB right turn lane	No	Fair Share	$350,000		$5,235
							Total:	**$1,208,000**		**$18,067**
							Total Costs for Horizon Year (2040) Improvements	**$2,746,600**		**$170,258**
							Total Project Fair Share Contribution to the City of Rialto[7]		**$116,442**	
							Total Project Fair Share Contribution to the County of San Bernardino[8]		**$48,581**	
							Total Project Fair Share Contribution to Caltrans[9]		**$5,235**	

[1] Improvements included in County of San Bernardino DIF or County DIF programs for local and regional components.

[2] Identifies the Project's responsibility to construct an improvement or contribute fair share or fee payment towards the implementation of the improvement shown.

[3] Costs have been estimated using the data provided in Appendix "G" of the CMP (2003) for preliminary construction costs.

[4] Appendix "G" costs escalated by a factor of 1.612 except Traffic Signals.

[5] Program improvements constructed by project may be eligible for fee credit, at discretion of City. See Table 7-1 for Fair Share Calculations.

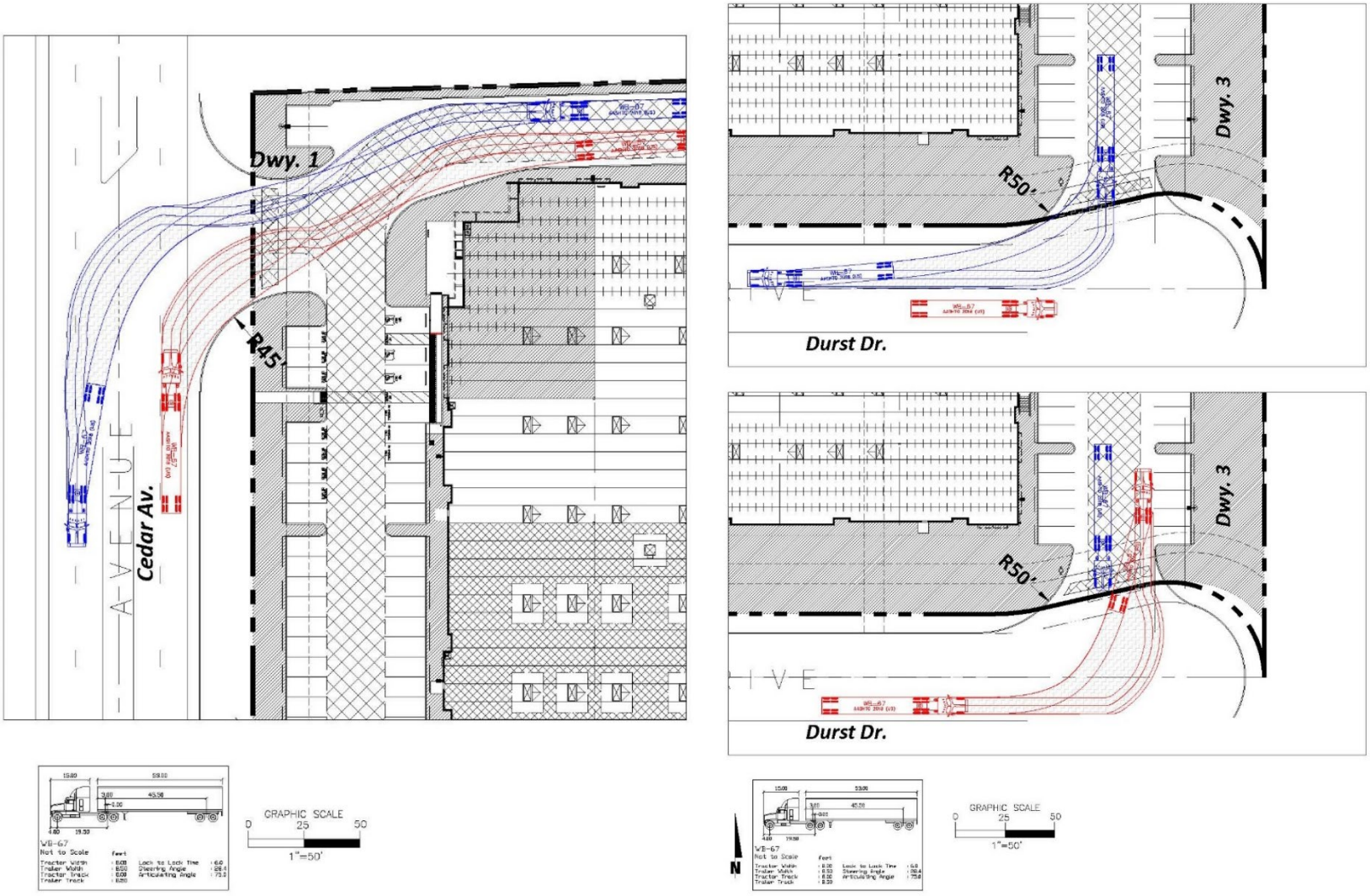
[6] Rough order of magnitude cost estimate.

[7] Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the City of Rialto.

[8] Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the County of San Bernardino.

[9] Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within Caltrans' jurisdiction.

EXHIBIT 1-5: TRUCK ACCESS



1.8 SIGHT DISTANCE ANALYSIS

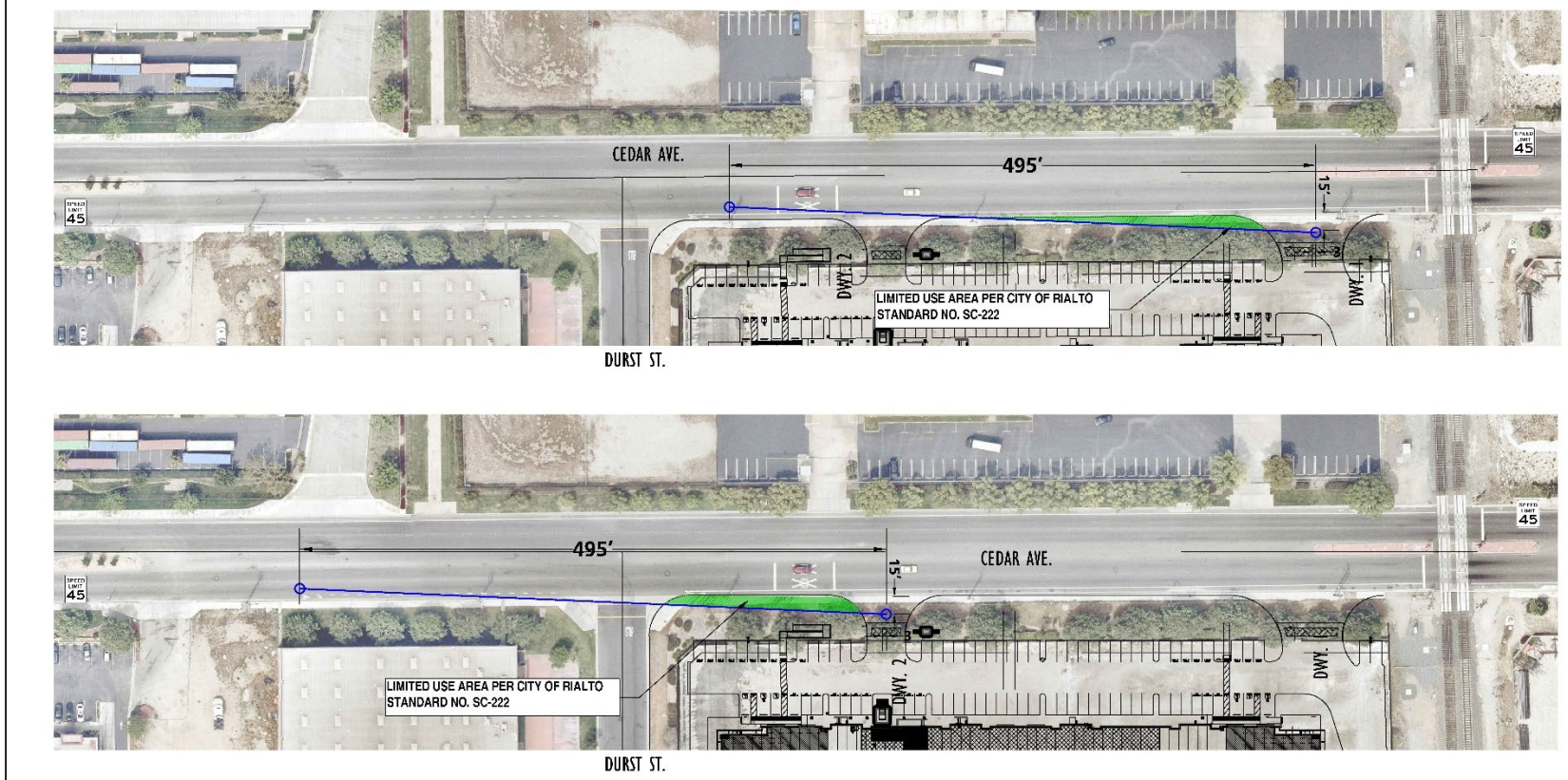
Horizontal sight distance has been evaluated for both Project driveways along Cedar Avenue based on the City of Rialto Standard Plan SC-222. As defined by the California Department of Transportation (Caltrans) Highway Design Manual, sight distance is the continuous length of highway ahead visible to the driver.

At unsignalized intersections, corner sight distance must provide a substantially clear line of sight between the driver of the vehicle waiting on the minor road (driveway) and the driver of an approaching vehicle. For the purposes of this analysis, a 7 ½ second criterion has been applied to the outside travel lanes in either direction to provide the most conservative sight distance. The 7 ½ second criterion allows waiting vehicles to either cross all lanes of through traffic by turning left or cross the near lanes by turning right without requiring through traffic to radically alter their speed. Vertical sight distance has been evaluated utilizing a 3.5-foot eye height and a 4.25-foot object height. The sight distance is based on the posted speed limit.

Adequate visibility for vehicular and pedestrian traffic can be provided at each Project driveway by limiting sight obstructions within the limited use area. Any landscaping/hardscape within the limited use area should not exceed 30-inches (2.5-feet) in height. The limited use area should be kept clear of any landscaping or any other obstructions that may impede the visibility of the driver, including on-street parking. Minimum horizontal sight distances for the Project driveways are illustrated on Exhibit 1-6 for both Driveway 1 and Driveway 2 on Cedar Avenue, however, sight distance should be re-evaluated in the field once the driveway has been constructed.

It is anticipated that the minimum 495-foot sight distance could be accommodated at both Driveway 1 and Driveway 2 along Cedar Avenue, based on a speed limit of 45 miles per hour. The sight distance lines, limited use area, and clear sight triangles per Rialto Standard Plan SC-222 are illustrated on Exhibit 1-6. Obstructions within the limited use are to be limited to 30-inches in height.

EXHIBIT 1-6: SIGHT DISTANCE



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2 METHODOLOGIES

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report. The methodologies described are consistent with City of Rialto's Traffic Study Guidelines.

2.1 LEVEL OF SERVICE

Traffic operations of roadway facilities are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

2.2 INTERSECTION CAPACITY ANALYSIS

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The 6th Edition Highway Capacity Manual (HCM) methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. (6) The HCM uses different procedures depending on the type of intersection control.

2.2.1 SIGNALIZED INTERSECTIONS

The City of Rialto and County of San Bernardino require signalized intersection operations analysis based on the methodology described in the HCM. (6) Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described on Table 2-1.

Consistent with Appendix B of the San Bernardino County CMP, the following saturation flow rates, in vehicles per hour green per lane (vphgpl), will be utilized in the traffic analysis for signalized intersections:

Existing, EAP, and EAPC Traffic Conditions:

- Exclusive through: 1800 vphgpl
- Exclusive left: 1700 vphgpl
- Exclusive right: 1800 vphgpl
- Exclusive dual left: 1600 vphgpl
- Exclusive triple left: 1500 vphgpl

TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F	F

Source: HCM (6th Edition)

The traffic modeling and signal timing optimization software package Synchro (Version 11) has been utilized to analyze signalized intersections within the City of Rialto. Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network.

The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. Common practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g., PHF = [Hourly Volume] / [4 x Peak 15-minute Flow Rate]). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for all analysis scenarios. Per the HCM, PHF values over 0.95 often are indicative of high traffic volumes with capacity constraints on peak hour flows while lower PHF values are indicative of greater variability of flow during the peak hour. (6)

California Department of Transportation (Caltrans)

The traffic modeling and signal timing optimization software package Synchro (Version 11) has also been utilized to analyze signalized intersections under Caltrans' jurisdiction, which include interchange to arterial ramps (i.e., I-10 Freeway ramps at Cedar Avenue, etc.). Signal timing for the freeway arterial-to-ramp intersections and the signalized intersections along the Cedar Avenue corridor have been obtained from the County and reflect the SBCTA coordinated signal timing that was implemented in 2020. It should be noted that for the purposes of this analysis, no optimization of signal timing has been performed for the LOS analysis unless noted otherwise (for improvements).

2.2.2 UNSIGNALIZED INTERSECTIONS

The City of Rialto and County of San Bernardino require the operations of unsignalized intersections be evaluated using the methodology described in the HCM. (6) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2).

TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay Per Vehicle (Seconds)	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Little or no delays.	0 to 10.00	A	F
Short traffic delays.	10.01 to 15.00	B	F
Average traffic delays.	15.01 to 25.00	C	F
Long traffic delays.	25.01 to 35.00	D	F
Very long traffic delays.	35.01 to 50.00	E	F
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F	F

Source: HCM (6th Edition)

At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For all-way stop-controlled intersections, LOS is computed for the intersection as a whole. For two-way stop-controlled intersections, the delay is reported for the worst single movement/lane (typically occurs on the side street).

2.3 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TA uses the signal warrant criteria presented in the latest edition of the Caltrans California Manual on Uniform Traffic Control Devices (CA MUTCD). (7)

The signal warrant criteria for Existing study area intersections are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The CA MUTCD indicates that the installation of a traffic signal should be

considered if one or more of the signal warrants are met. (7) Specifically, this TA utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing traffic conditions. Warrant 3 is appropriate to use for this TA because it provides specialized warrant criteria for intersections with rural characteristics (e.g., located in communities with populations of less than 10,000 persons or with adjacent major streets operating above 40 miles per hour). For the purposes of this study, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection.

Future intersections that do not currently exist have been assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans planning level ADT-based signal warrant analysis worksheets. Traffic signal warrant analyses were performed for the following study area intersection shown on Table 2-3:

TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS

ID	Intersection	Jurisdiction
3	Cedar Av. & Durst Dr.	Rialto
8	Driveway 3 & Durst Dr.	Rialto

The Existing conditions traffic signal warrant analysis is presented in the subsequent section, Section 3 *Area Conditions* of this report. The traffic signal warrant analyses for future conditions are presented in Section 5 *EAP (2023) Traffic Conditions* and Section 6 *EAPC (2023) Traffic Conditions* of this report. It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

2.4 FREEWAY OFF-RAMP QUEUING ANALYSIS

The study area for this TA includes the I-10 Freeway at Cedar Avenue interchange. The 95th percentile queuing of vehicles has been assessed at the off-ramps to determine potential queuing deficiencies at the freeway ramp intersections at the interchanges identified above. Specifically, the queuing analysis is utilized to identify any potential queuing and "spill back" onto the I-10 Freeway mainline from the off-ramps.

The traffic progression analysis tool and HCM intersection analysis program, Synchro, has been used to assess the potential deficiencies/needs of the intersections with traffic added from the proposed Project. Storage (turn-pocket) length recommendations at the ramps have been based upon the 95th percentile queue resulting from the Synchro progression analysis. There are two footnotes which appear on the Synchro outputs. One footnote indicates if the 95th percentile cycle exceeds capacity. Traffic is simulated for two complete cycles of the 95th percentile traffic in Synchro in order to account for the effects of spillover between cycles. In practice, the 95th percentile queue shown will rarely be exceeded and the queues shown with the footnote are

acceptable for the design of storage bays. The other footnote indicates whether or not the volume for the 95th percentile queue is metered by an upstream signal. If the upstream intersection is at or near capacity, the 50th percentile queue represents the maximum queue experienced.

A vehicle is considered queued whenever it is traveling at less than 10 feet/second. A vehicle will only become queued when it is either at the stop bar or behind another queued vehicle. The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes during the peak hour and is derived from the average (50th percentile) queue plus 1.65 standard deviations. The queue length reported is for the lane with the highest queue in the lane group. The 95th percentile queue is not necessarily ever observed it is simply based on statistical calculations.

2.5 MINIMUM ACCEPTABLE LEVELS OF SERVICE (LOS)

Minimum Acceptable LOS and associated definitions of intersection deficiencies has been obtained from each of the applicable surrounding jurisdictions.

2.5.1 CITY OF RIALTO

The following LOS will be utilized for study area intersections located within the City: The City of Rialto 2010 General Plan Update has established minimum LOS standards. Specifically, General Plan Policies 4-1.20 and 4-1.21 establish the minimum standards to be applied to any TIA, as follows:

- Policy 4-1.20: Design City streets so that signalized intersections operate at Level of Service (LOS) D or better during the morning and evening peak hours and require new development to mitigate traffic impacts that degrade LOS below that level.
- Policy 4-1.21: Design City streets so that unsignalized intersections operate with no vehicular movement having an average delay greater than 120 seconds during the morning and evening peak hours and require new development to mitigate traffic impacts that increase delay above that level.

The City's Traffic Study Guidelines identifies LOS D as the minimum LOS for intersections and roadway segments, with the exception of Riverside Drive south of the Metrolink tracks to the City's southern border, which can operate at LOS E.

2.5.2 COUNTY OF SAN BERNARDINO

Per the County of San Bernardino's TA Guidelines, the following LOS will be utilized for study area intersections located within the County: Require development to achieve a peak hour Level of Service (LOS) D or better. Therefore, any intersection operating at LOS E or F will be considered deficient for the purposes of this analysis.

2.5.3 SAN BERNARDINO COUNTY CMP

The CMP definition of deficiency is based on maintaining a level of service standard of LOS E or better, where feasible, except where an existing LOS F condition is identified in the CMP

document. However, for the purposes of this analysis, LOS D has been utilized for all study area intersections.

2.6 DEFICIENCY CRITERIA

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies.

2.6.1 INTERSECTIONS

City of Rialto

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies at intersections within the City of Rialto. Consistent with the City's traffic study guidelines, new development is required to improve traffic deficiencies exceeding these levels. Deficiencies are deemed to occur at any intersection in which the Project causes the LOS to fall below LOS D or the peak hour delay to increase as follows:

- LOS A/B = By 10.0 seconds
- LOS C = By 8.0 seconds
- LOS D = By 5.0 seconds
- LOS E = By 2.0 seconds
- LOS F = By 1.0 seconds

County of San Bernardino: Signalized Intersections

Per the County's TA Guidelines, the following LOS will be utilized for signalized study area intersections located within the Desert, Valley and Mountain regions of the County:

- Any signalized study intersection in the Valley or Mountain regions that is operating at an acceptable LOS D or better without project traffic in which the addition of project traffic causes the intersection to degrade to an LOS E or F shall identify improvements to improve operations to LOS D or better.
- Any signalized study intersection in the Desert region that is operating at an LOS C or better without project traffic in which the addition of project traffic causes the intersection to degrade to an LOS D, E, or F shall identify improvements to improve operations to LOS C.
- Any signalized study intersection in the Valley or Mountain regions that is operating at LOS E or F without project traffic where the project increases delay by 5.0 or more seconds shall identify improvements to offset the increase in delay.
- Any signalized study intersection in the Desert region that is operating at LOS D, E, or F without project traffic where the project increases delay by 5.0 or more seconds shall identify improvements to offset the increase in delay.

County of San Bernardino: Unsignalized Intersections

Per the County's TA Guidelines, the following LOS will be utilized for unsignalized study area intersections located within the Desert, Valley and Mountain regions of the County:

- The addition of project related traffic causes the intersection to degrade from an LOS D or better to a LOS E or worse in the Valley and Mountain regions or from an LOS C or better to an LOS D or worse in the Desert region.

  OR

- The project adds 5.0 seconds or more of delay to an intersection that is already projected to operate without project traffic at an LOS E or F in the Valley and Mountain regions or at an LOS D, E, or F in the Desert region (per Section 10.5.2 b))

  AND

- One or both of the following conditions are met:
  - The project adds ten (10) or more trips to any approach
  - The intersection meets the peak hour traffic signal warrant after the addition of project traffic (per Section 10.5.2 c)).

The proposed significance thresholds will be applied at study area intersections for the purposes of determining project-related deficiencies. Per the County of San Bernardino traffic study guidelines, improvements for Project level deficiencies should focus on providing operations that offset the Project deficiency to achieve a "no Project" LOS.

2.6.2 CALTRANS FACILITIES

To determine whether the addition of project traffic to the State Highway facilities would result in a deficiency, the following will be utilized:

- The TA finds that the LOS of a ramp-to-arterial intersection will degrade from D or better to E or F.

The TA finds that a project will exacerbate an already deficient condition if it contributes 50 or more one-way peak hour trips.

2.7 PROJECT FAIR SHARE CALCULATION METHODOLOGY

In cases where this TA identifies that the Project would contribute additional traffic volumes to traffic deficiencies, Project fair share costs of improvements necessary to address deficiencies have been identified. The Project's fair share cost of improvements is determined based on the following equation, which is the ratio of Project traffic to new traffic, and new traffic is total near-term future (EAPC) traffic less existing baseline traffic:

Project Fair Share % = Project AM/PM Traffic / (EAPC AM/PM Total Traffic – Existing AM/PM Traffic)

The project fair share percentage has been calculated for both the AM peak hour and PM peak hour and the highest of the two has been selected. The Project fair share contribution calculations are presented in Section 7 *Local and Regional Funding Mechanisms* of this TA. The cost of implementing the improvements shown on Table 1-3 have been estimated based on the preliminary construction cost estimates found in Appendix G of the San Bernardino County CMP in conjunction with a total cost escalation factor of 1.612 to more closely approximate current costs. These cost estimates have been utilized in conjunction with the Project fair share percentages to determine the Project's fair share cost of the recommended improvements (see Table 7-1). These estimates are a rough order of magnitude only as they are intended only for discussion purposes and do not imply any legal responsibility or formula for contributions or physical improvements.

3 AREA CONDITIONS

This section provides a summary of the existing circulation network, the City of Rialto General Plan Circulation Network, and a review of existing peak hour intersection operations, traffic signal warrant, and off-ramp queuing analyses.

3.1 EXISTING CIRCULATION NETWORK

Pursuant to the agreement with City of Rialto staff (Appendix 1.1), the study area includes a total of 8 existing and future intersections as shown previously on Exhibit 1-3. Exhibit 3-1 illustrates the study area intersections located near the proposed Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

3.2 CITY OF RIALTO GENERAL PLAN CIRCULATION ELEMENT

Exhibit 3-2 shows the City of Rialto General Plan Circulation Element, and Exhibit 3-3 illustrates the City of Rialto General Plan roadway cross-sections.

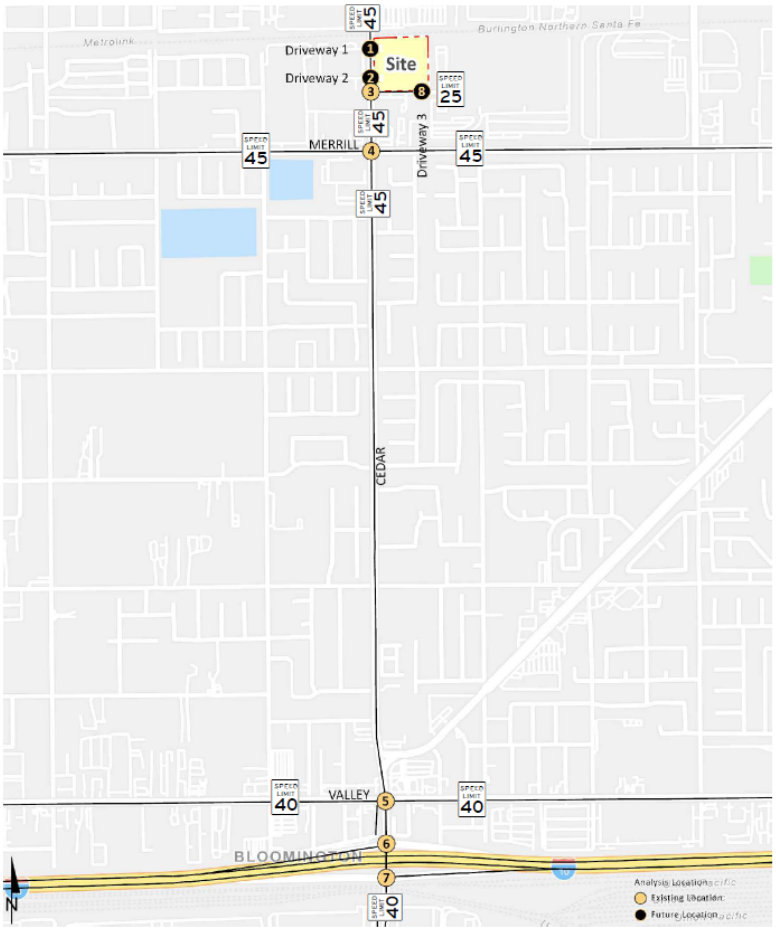
Major Arterial can accommodate six travel lanes and 14 to 18-foot raised medians within a 120-foot right-of-way. These facilities are intended to carry large volumes of relatively high-speed traffic between the region to different parts of the City. Example of Major Arterials within the study area include:

- Cedar Avenue
- Valley Boulevard

Secondary Arterials can accommodate four travel lanes and left turn lanes within an 88-foot right-of-way. These facilities typically accommodate intermediate traffic speeds and link Local Streets with Major Arterials. Secondary arterials have narrower travel lanes as compared to the Major Arterial. An example of a Secondary Arterial within the study area includes:

- Merrill Avenue

EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS



1 Cedar Av. & Dwy. 1	2 Cedar Av. & Dwy. 2	3 Cedar Av. & Durst Dr.	4 Cedar Av. & Merrill Av.	5 Cedar Av. & Valley Bl.
Future Intersection	Future Intersection	4D, 2U, 4D	4D, 3D, 4D	5D, 4D, 4D, RTO, RTO, 5D, RTO

6 Cedar Av. & I-10 WB Ramps	7 Cedar Av. & I-10 EB Ramps	8 Dwy. 3 & Durst Dr.
5D, 5D	5D, 3D, 4D, 5D	Future Intersection

= Traffic Signal
= Stop Sign
4 = Number of Lanes
D = Divided
U = Undivided
RTO = Right Turn Overlap
25 = Speed Limit (MPH)

EXHIBIT 3-2: CITY OF RIALTO GENERAL PLAN CIRCULATION ELEMENT

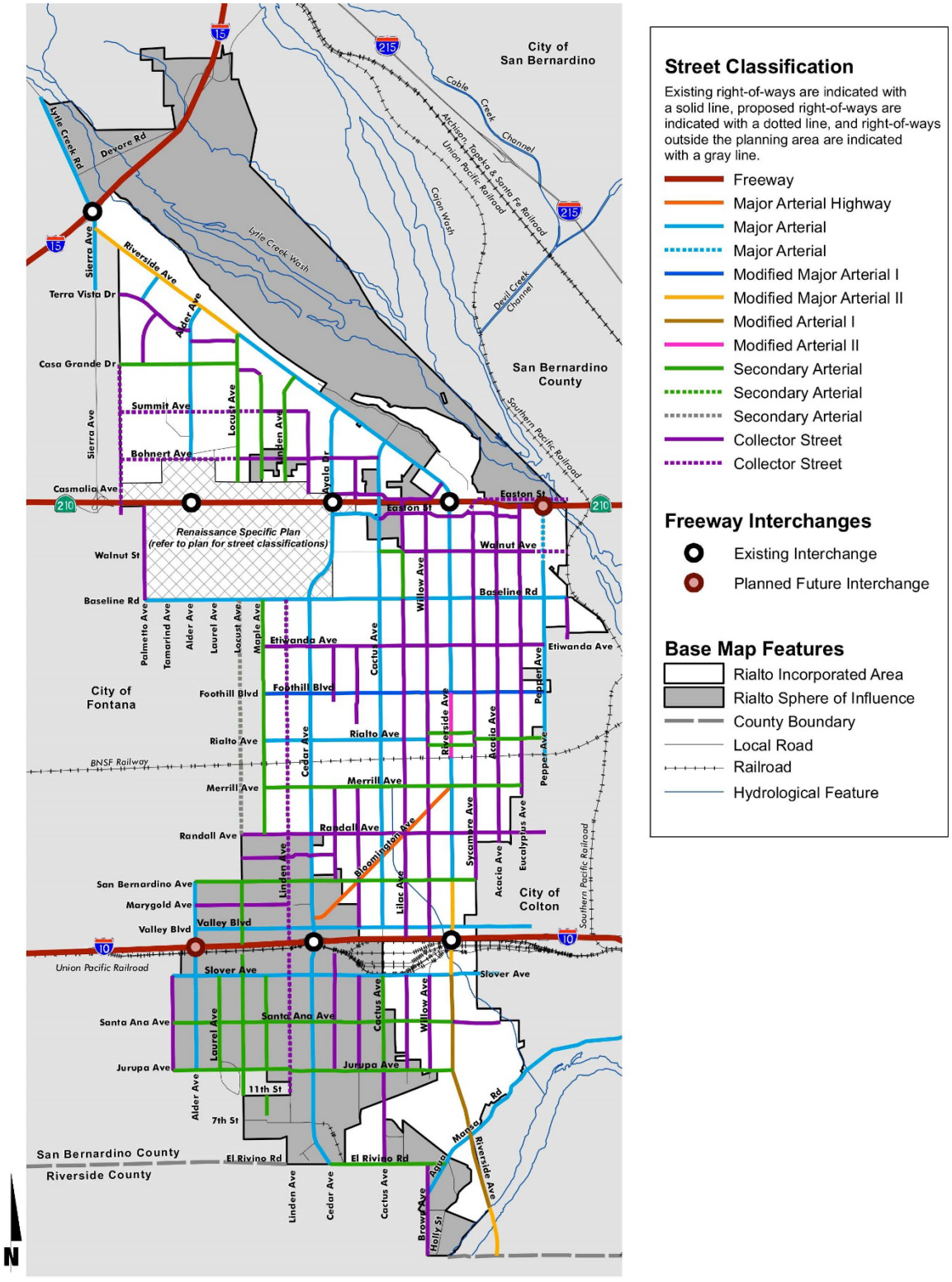
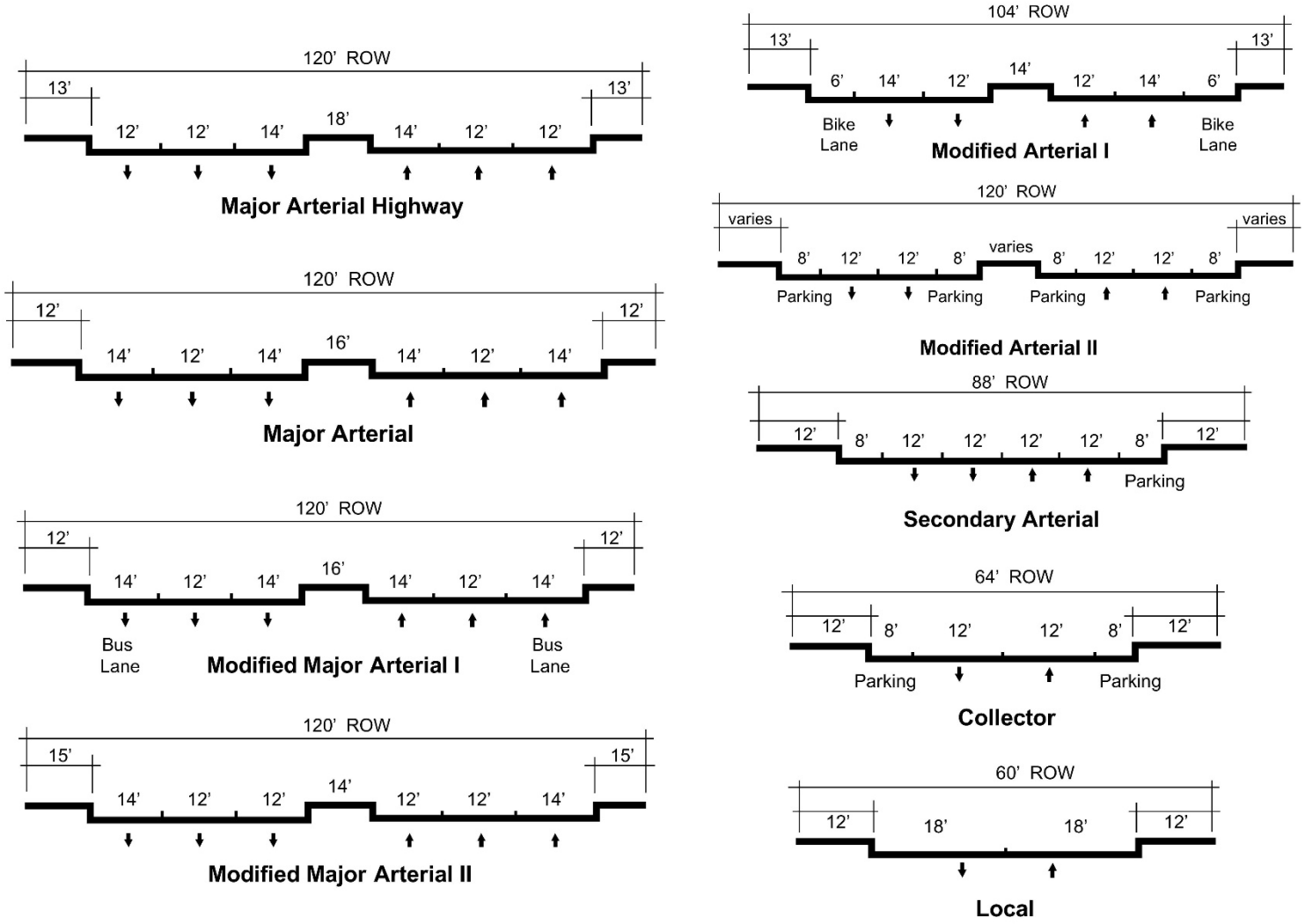


EXHIBIT 3-3: CITY OF RIALTO ROADWAY CROSS-SECTIONS



3.3 COUNTY OF SAN BERNARDINO GENERAL PLAN CIRCULATION ELEMENT

The study area contains five intersections that exist within the County of San Bernardino. Exhibit 3-4 shows the County of San Bernardino General Plan Circulation Element, and Exhibit 3-5 illustrates the County of San Bernardino General Plan Roadway Cross-Sections. The study area roadways that lie within the unincorporated areas of the County of San Bernardino are described below.

Major Highways are designed to accommodate four travel lanes with a median, within a typical 104-foot right of way, carry high traffic volumes and provide limited access. Their primary function is to link the major arterial highways to the secondary arterials, as well as to carry vehicles entering and exiting the unincorporated County area from neighboring areas. Driveway access is also typically limited on these facilities, where feasible. The following study area roadways within the City of Rialto are classified as Major Highways:

- Cedar Avenue
- Valley Avenue

3.4 TRUCK ROUTES

The City of Rialto's truck routes are shown on Exhibit 3-6. The County of San Bernardino does not have a truck route map. The truck trip distribution patterns for the proposed Project have been developed through consultation with the City during the TA scoping process and are consistent with other nearby studies.

3.5 TRANSIT SERVICE

The study area is currently served by Omnitrans, a public transit agency serving various jurisdictions within San Bernardino County, with bus service along Merrill Avenue via Route 15; along San Bernardino Avenue via Route 19; and along Valley Avenue and Cedar Avenue via Route 329. Route 290 runs along the I-10 Freeway but does not provide transit service to the study area. As shown on Exhibit 3-7, there are currently no routes that run adjacent to the Project. Transit service is reviewed and updated by Omnitrans periodically to address ridership, budget, and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate.

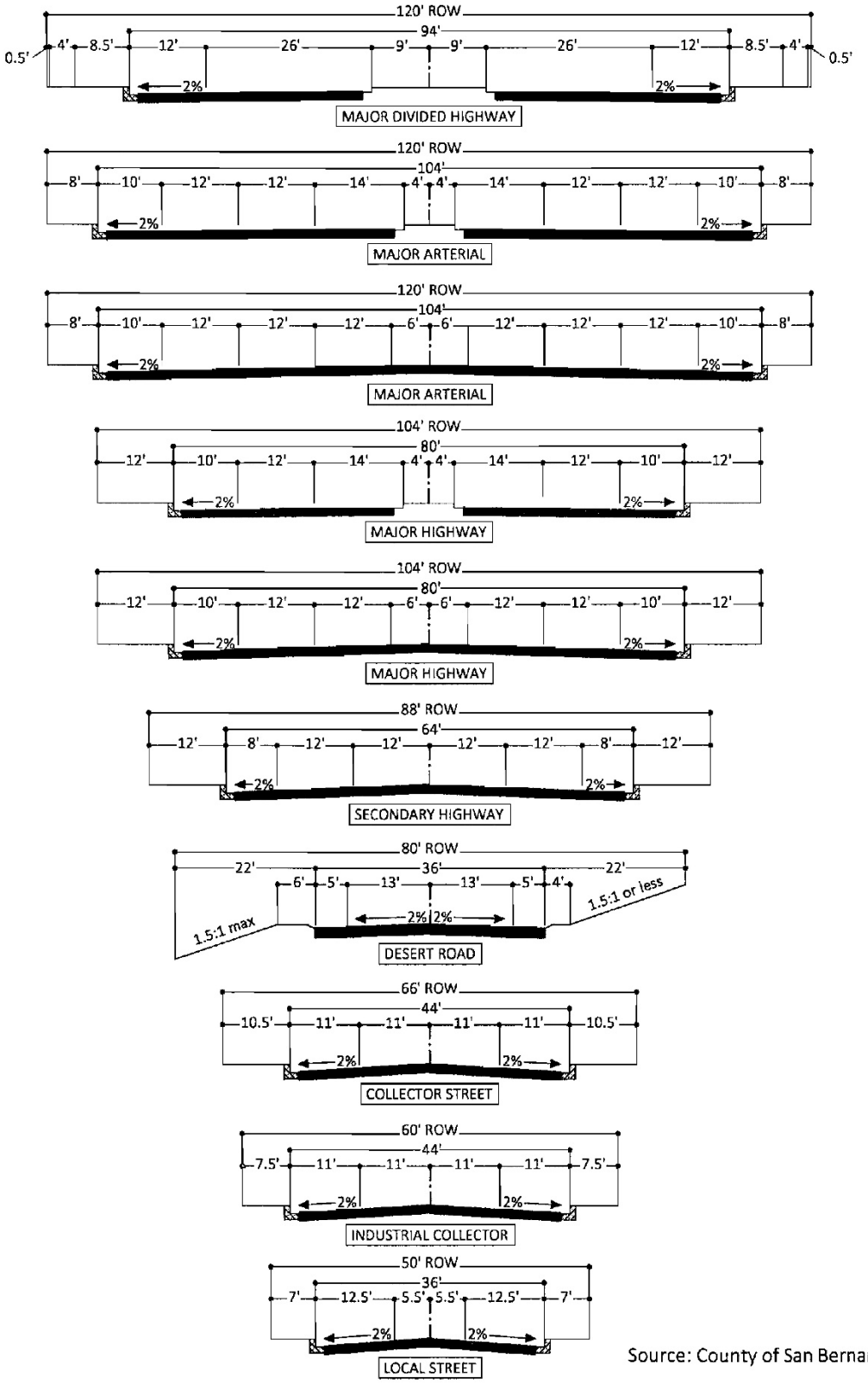
3.6 BICYCLE & PEDESTRIAN FACILITIES

The City of Rialto's bicycle facilities are shown on Exhibit 3-8. As shown, there are no existing bicycle facilities within the study area. The County of San Bernardino does not have an exhibit showing bikeways and trails. Field observations indicate nominal pedestrian and bicycle activity within the study area. As shown on Exhibit 3-9, pedestrian facilities are built out along portions Cedar Avenue, Merrill Avenue, and Valley Avenue.

EXHIBIT 3-4: COUNTY OF SAN BERNARDINO GENERAL PLAN CIRCULATION ELEMENT



EXHIBIT 3-5: COUNTY OF SAN BERNARDINO GENERAL PLAN ROADWAY CROSS-SECTIONS



Source: County of San Bernardino

EXHIBIT 3-6: CITY OF RIALTO TRUCK ROUTES

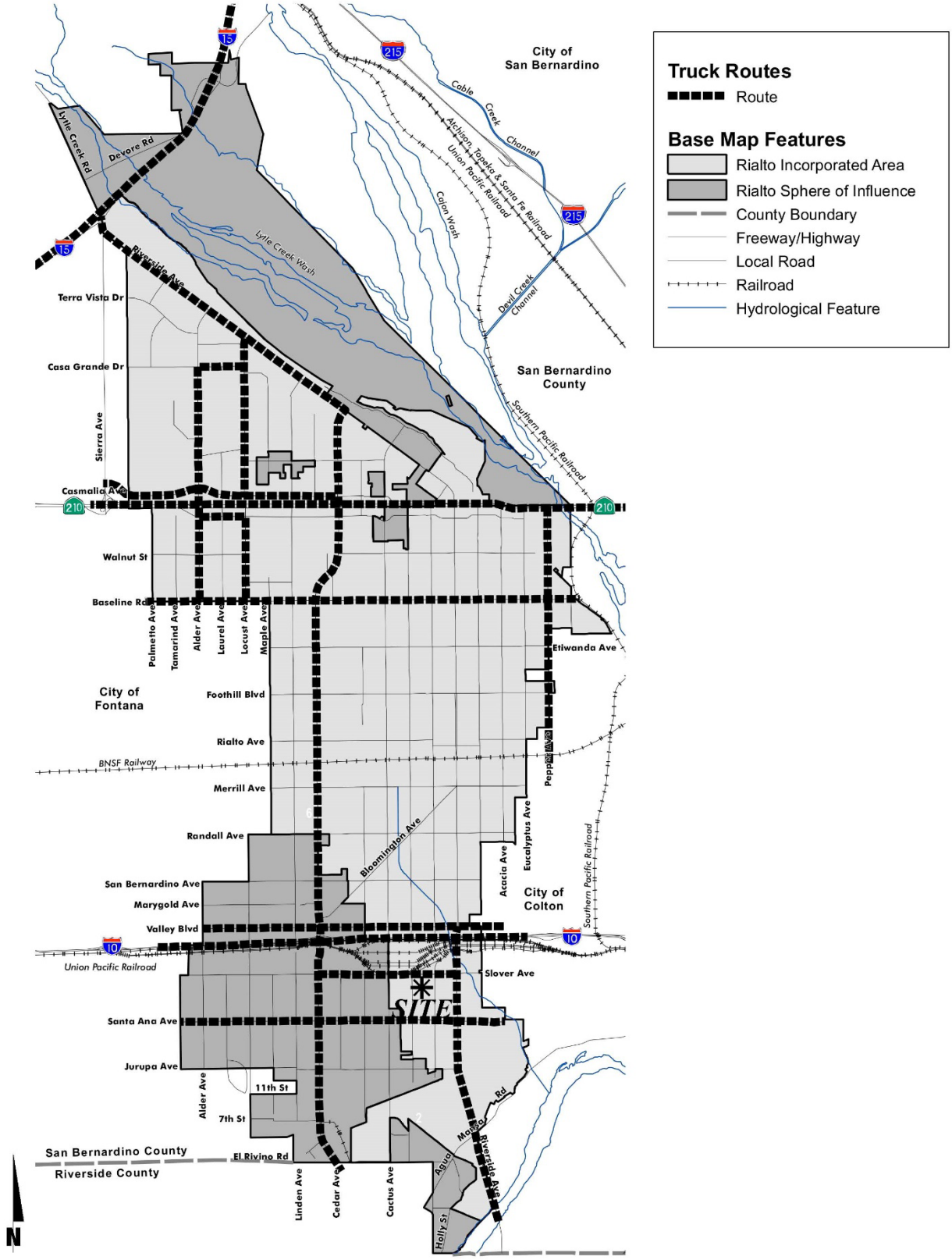


EXHIBIT 3-7: EXISTING TRANSIT ROUTES

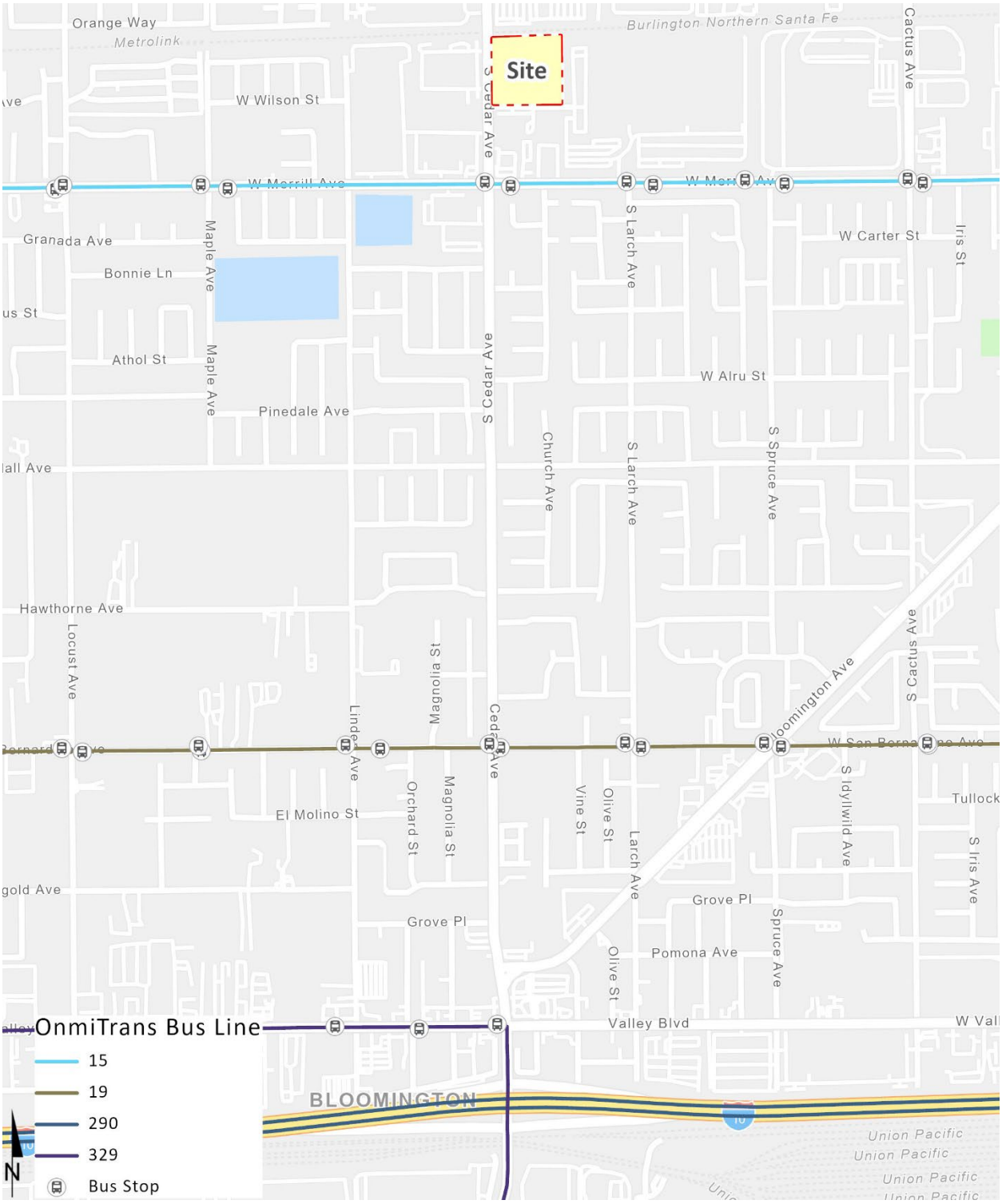


EXHIBIT 3-8: CITY OF RIALTO BICYCLE FACILITIES

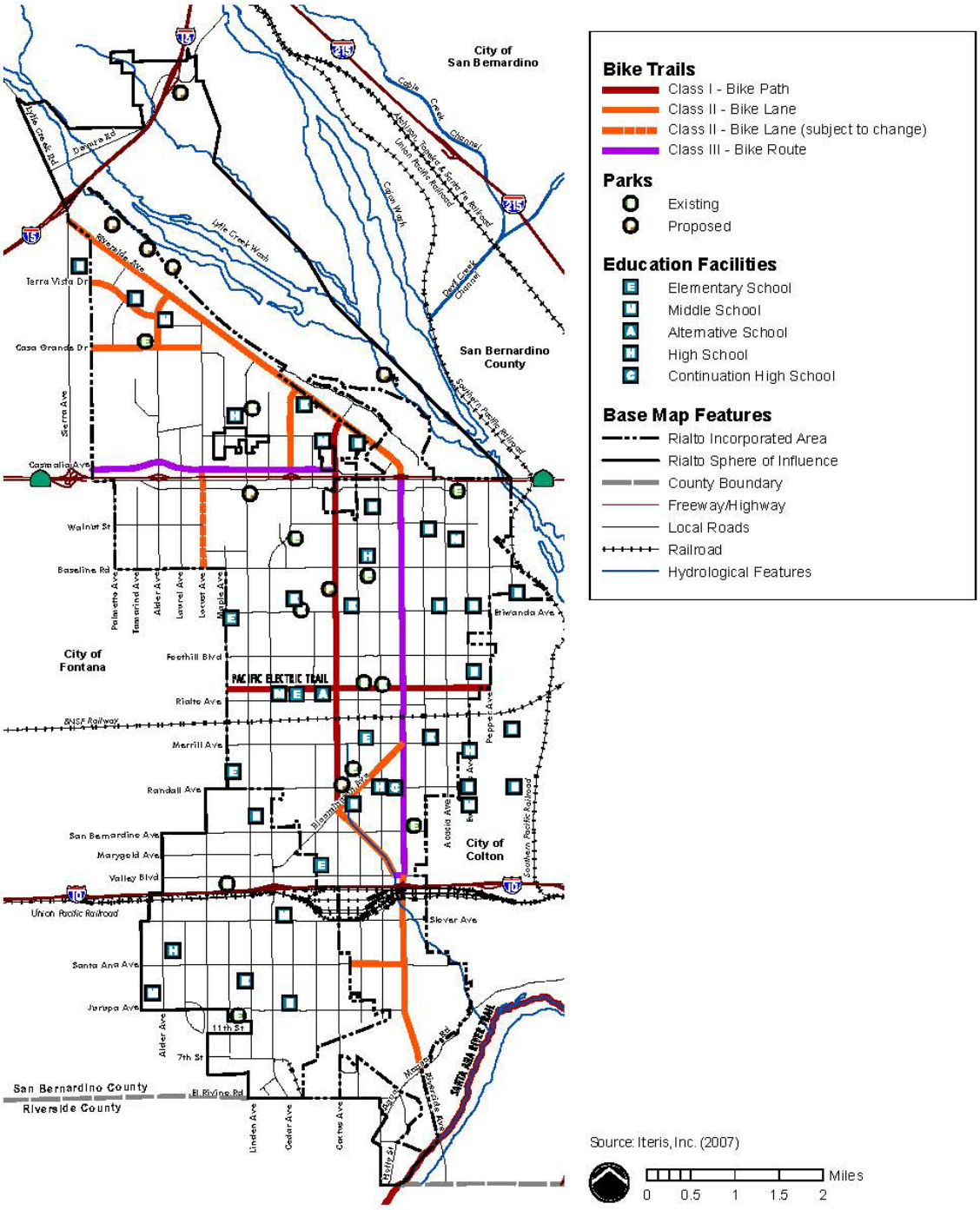
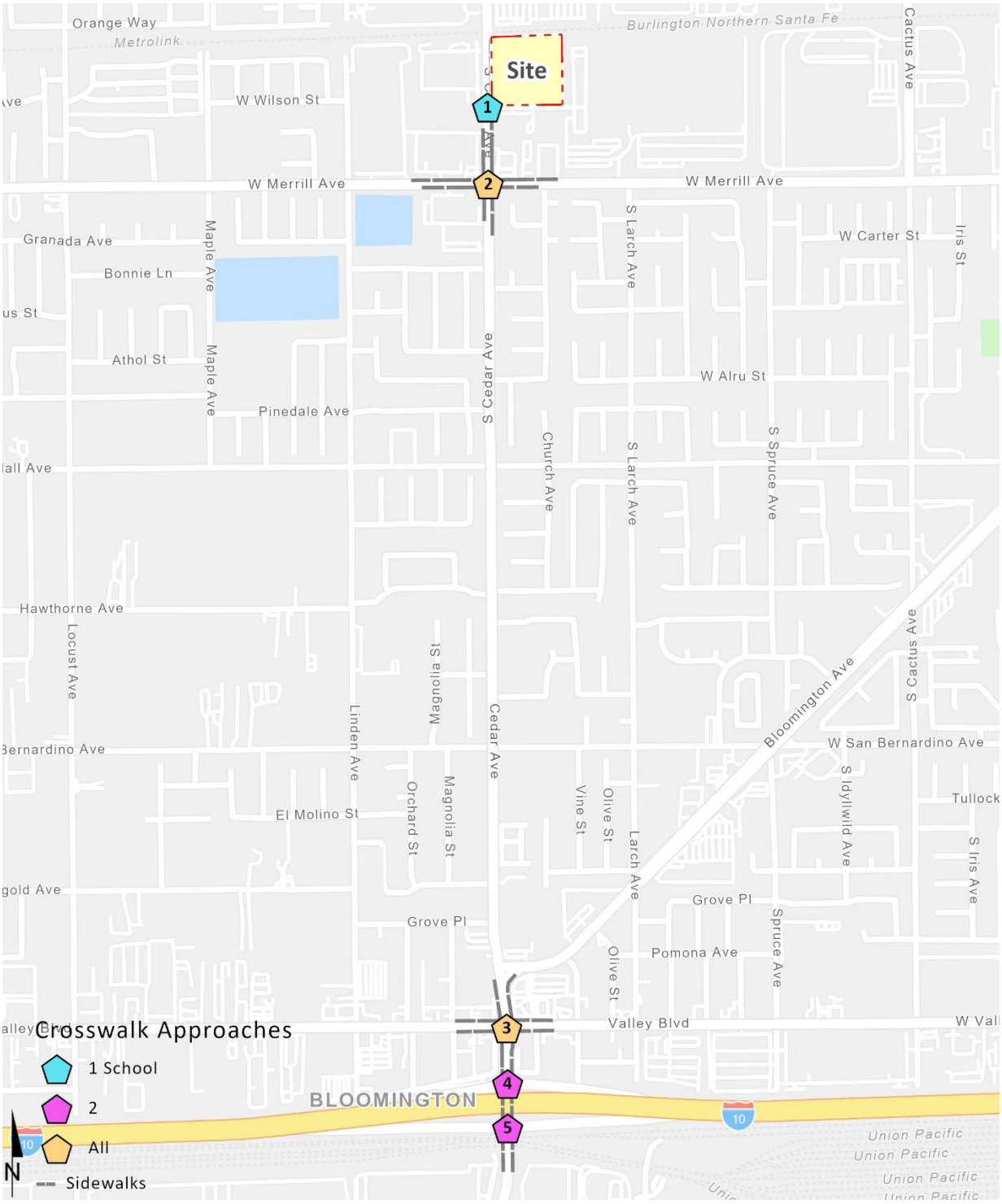


EXHIBIT 3-9: EXISTING PEDESTRIAN FACILITIES



3.7 EXISTING (2021) TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in October 2021. The following peak hours were selected for analysis:

- Weekday AM Peak Hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 6:00 PM)

The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1.

The traffic counts include the following vehicle classifications: Passenger Cars, 2-Axle Trucks, 3-Axle Trucks, and 4 or More Axle Trucks. To represent the effects large trucks, buses and recreational vehicles have on traffic flow; all trucks were converted into PCE. By their size alone, these vehicles occupy the same space as two or more passenger cars. In addition, the time it takes for them to accelerate and slow-down is much longer than for passenger cars and varies depending on the type of vehicle and number of axles. For the purpose of this analysis, a PCE factor of 1.5 has been applied to 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for 4+-axle trucks to estimate each turning movement. These factors are consistent with the values recommended for use in the CMP and the City's Traffic Study Guidelines.

Two locations of 24-hour tube counts were collected within the Project study area. First location was on Cedar Avenue north of Durst Drive and second location was on Valley Avenue east of Cedar Avenue. Where actual 24-hour tube count data was not available, Existing ADT volumes were based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

Weekday PM Peak Hour (Approach Volume + Exit Volume) x 13.22 = Leg Volume

A comparison of the PM peak hour and daily traffic volumes of various roadway segments within the study area indicated that the peak-to-daily relationship is approximately 7.56 percent. As such, the above equation utilizing a factor of 13.22 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 7.56 percent (i.e., 1/0.0756 = 13.22) and was assumed to sufficiently estimate average daily traffic (ADT) volumes for planning-level analyses. Existing weekday AM and weekday PM peak hour intersection volumes are shown on Exhibit 3-10. Note volumes shown are in actual vehicles. The PCE volumes used for the peak hour operations analyses can be found in the applicable appendix with the intersection operations analysis worksheets.

3.8 INTERSECTION OPERATIONS ANALYSIS

Signal timing for the freeway arterial-to-ramp intersections and the signalized intersections along the Cedar Avenue corridor have been obtained from the County and reflect the SBCTA coordinated signal timing that was implemented in 2020. It should be noted that for the purposes of this analysis, no optimization of signal timing has been performed for the LOS analysis unless noted otherwise (for improvements). Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection operations analysis results are summarized on Table 3-1, which indicates all existing study area intersections are currently operating at an acceptable LOS during the peak hours. The intersection operations analysis worksheets are included in Appendix 3.2 of this TA.

TABLE 3-1: INTERSECTION ANALYSIS FOR EXISTING (2021) CONDITIONS

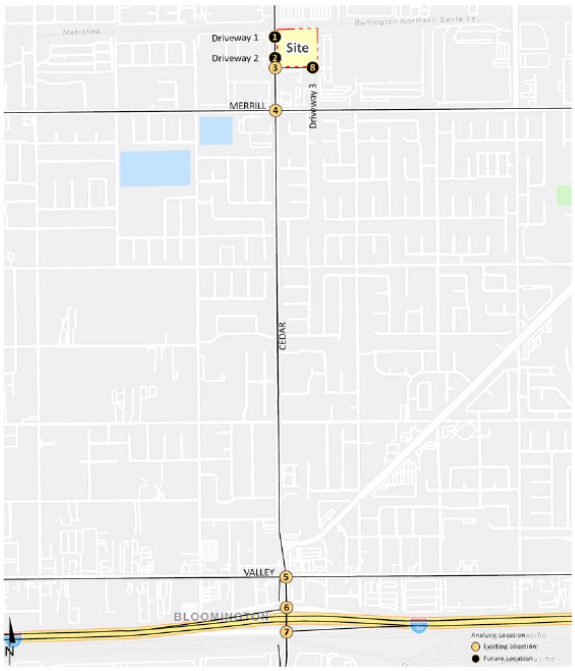
#	Intersection	Traffic Control[1]	Delay[2] (secs.)		Level of Service	
			AM	PM	AM	PM
1	Cedar Av. & Driveway 1		Future Intersection			
2	Cedar Av. & Driveway 2		Future Intersection			
3	Cedar Av. & Durst Dr.	CSS	19.7	27.4	C	D
4	Cedar Av. & Merrill Av.	TS	20.4	20.4	C	C
5	Cedar Av. & Valley Blvd.	TS	34.1	44.5	C	D
6	Cedar Av. & I-10 WB	TS	33.7	21.6	C	C
7	Cedar Av. & I-10 EB	TS	27.9	30.4	C	C
8	Driveway 3 & Durst Dr.		Future Intersection			

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

1 TS = Traffic Signal; CSS = Cross-Street Stop; **CSS** = Improvement

2 Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

EXHIBIT 3-10: EXISTING (2021) TRAFFIC VOLUMES



1 Cedar Av. & Driveway 1

Future Intersection

2 Cedar Av. & Driveway 2

Future Intersection

3 Cedar Av. & Durst Dr.

29,300 / *1,100* / *27,750*

1066(942) ↓ 15(5) ↳ 816(1007) →

↰ 4(26)

↰ 6(39)

→ 35(11) ↱

4 Cedar Av. & Merrill Av.

26,750 / *12,750* / *23,350* / *12,750*

85(85) ↳ 127(128) →

726(713) ↓ 190(337) →

176(146) ↳ 24(79) ↓

↰ 93(126)

← 260(219)

↰ 57(51)

↰ 63(69) ↑ 565(731) ↑ 37(39) ↱

5 Cedar Av. & Valley Blvd.

33,400 / *15,850* / *44,250* / *24,500*

20(71) ↳ 53(258) →

1052(883) ↓ 147(391) →

38(76) ↳ 463(456) ↓

↰ 30(61)

← 233(241)

↰ 311(242)

↰ 310(347) ↑ 937(1059) ↑ 235(201) ↱

6 Cedar Av. & I-10 WB

44,250 / *8,450* / *8,750* / *37,150*

585(483) ↳ 1241(1098) ↓

↰ 361(391)

← 1(1)

↰ 380(216)

↰ 207(146) ↑ 1121(1216) ↑

7 Cedar Av. & I-10 EB

37,150 / *9,400* / *9,050* / *31,250*

1240(952) ↓ 382(507) →

381(362) ↳ 3(7) →

291(137) ↴

↑ 946(855) ↑ 364(307) ↱

8 Driveway 3 & Durst Dr.

Future Intersection

##(##) AM(PM) Peak Hour Intersection Volumes

***Average Daily Trips***

3.9 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants for Existing traffic conditions are based on existing peak hour intersection turning volumes. None of unsignalized study area intersections currently warrant a traffic signal under Existing traffic conditions. Existing conditions traffic signal warrant analysis worksheets are provided in Appendix 3.3.

3.10 OFF-RAMP QUEUING ANALYSIS

A queuing analysis was performed for the off-ramps at the study area intersections along the I-10 Freeway to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially "spill back" onto the I-10 Freeway mainlines. Queuing analysis findings are presented on Table 3-2. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown on Table 3-2, there are no movements that are currently experiencing queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows. Worksheets for Existing traffic conditions off-ramp queuing analysis are provided in Appendix 3.4.

TABLE 3-2: PEAK HOUR FREEWAY OFF-RAMP QUEUING SUMMARY FOR EXISTING (2021) CONDITIONS

#	Intersection	Movement	Available Stacking Distance (Feet)	95th Percentile Queue (Feet)		Acceptable? [1]	
				AM Peak Hour	PM Peak Hour	AM	PM
6	Cedar Av. & I-10 WB Ramps	WBL/T/R	1270	520 [2]	398 [2]	Yes	Yes
		WBR	480	294	326	Yes	Yes
7	Cedar Av. & I-10 EB Ramps	EBL	475	384	455 [2]	Yes	Yes
		EBL/T/R	1900	362	371	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

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4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volumes estimated to be generated by the Project, as well as the Project's trip assignment onto the study area roadway network. The Project is proposed to consist of a single 235,000 square foot warehouse building. It is anticipated that the Project would be developed in a single phase with an anticipated Opening Year of 2023. For the purpose of this analysis, the following driveways will be assumed to provide access to the Project site:

- Driveway 1 on Cedar Avenue – Right-in/Left-out access (passenger cars and trucks)
- Driveway 2 on Cedar Avenue – Right-in/Right-out access (passenger cars only)
- Driveway 3 on Durst Drive – Full access (passenger cars and trucks)

Regional access to the Project site will be provided by the I-10 Freeway via Cedar Avenue.

4.1 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic which is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development. Trip generation rates used to estimate Project traffic are shown in Table 4-1. The trip generation rates used for this analysis are based on the Institute of Transportation Engineers (ITE) Trip Generation Manual (9th Edition, 2012) for Warehousing (ITE Land Use Code 150). The vehicle and truck mix were sourced from the City of Rialto's Public Works Department's Traffic Impact Analysis Report Guidelines and Requirements (adopted February 4, 2014).

TABLE 4-1: PROJECT TRIP GENERATION RATES

Land Use[1]	ITE LU Code	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicles:									
Warehousing[3]	150	TSF	0.240	0.060	0.300	0.080	0.240	0.320	3.560
Passenger Cars (60.0%)			0.144	0.036	0.180	0.048	0.144	0.192	2.136
2-Axle Trucks (0.8%)			0.002	0.001	0.003	0.001	0.002	0.003	0.029
3-Axle Trucks (11.2%)			0.027	0.007	0.034	0.009	0.027	0.036	0.399
4-Axle+ Trucks (28.0%)			0.067	0.016	0.083	0.022	0.067	0.089	0.996
Passenger Car Equivalent (PCE):									
Warehousing[3]	150	TSF	0.240	0.060	0.300	0.080	0.240	0.320	3.560
Passenger Cars (60.0%)			0.144	0.036	0.180	0.048	0.144	0.192	2.136
2-Axle Trucks (0.8%) (PCE = 1.5)[4]			0.003	0.002	0.005	0.002	0.003	0.005	0.044
3-Axle Trucks (11.2%) (PCE = 2.0)[4]			0.054	0.014	0.068	0.018	0.054	0.072	0.798
4-Axle+ Trucks (28.0%) (PCE = 3.0)[4]			0.201	0.048	0.249	0.066	0.201	0.267	2.988

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Ninth Edition (2012).

[2] TSF = thousand square feet

[3] Vehicle and Truck Mix Source: City of Rialto Public Works Department Traffic Impact Analysis Report Guidelines and Requirements (2013).

[4] PCE rates are per City of Rialto Public Works Department Traffic Impact Analysis Report Guidelines and Requirements (2013).

As shown in Table 4-2, the proposed Project is anticipated to generate a net total of 840 two-way trips per day with 74 AM peak hour trips and 80 PM peak hour trips. In comparison, the proposed Project is anticipated to generate a net total of 1,406 PCE trip-ends per day with 122 PCE AM peak hour trips and 130 PCE PM peak hour trips.

TABLE 4-2: PROJECT TRIP GENERATION SUMMARY

		AM Peak Hour			PM Peak Hour			
Project Land Use	**Quantity Units[1]**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**Daily**
Actual Vehicles:								
Warehouse	235.000 TSF							
Passenger Cars:		34	9	43	12	34	46	502
2-axle Trucks:		1	1	2	1	1	2	8
3-axle Trucks:		7	2	9	3	7	10	94
4+-axle Trucks:		16	4	20	6	16	22	236
Total Trucks:		24	7	31	10	24	34	338
Total Net Trips (Actual Vehicles)		**58**	**16**	**74**	**22**	**58**	**80**	**840**
Passenger Car Equivalent (PCE):								
Warehouse	235.000 TSF							
Passenger Cars:		34	9	43	12	34	46	502
2-axle Trucks:		1	1	2	1	1	2	12
3-axle Trucks:		13	4	17	5	13	18	188
4+-axle Trucks:		48	12	60	16	48	64	704
Total Trucks (PCE):		62	17	79	22	62	84	904
Total Net Trips (PCE)		**96**	**26**	**122**	**34**	**96**	**130**	**1,406**

[1] TSF = thousand square feet

4.2 PROJECT TRIP DISTRIBUTION

The Project trip distribution represents the directional orientation of traffic to and from the Project site. Trip distribution is the process of identifying the probable destinations, directions or traffic routes that will be utilized by Project traffic. The potential interaction between the planned land uses and surrounding regional access routes are considered to identify the route where the Project traffic would distribute. Truck distribution patterns are based on truck routes, the site's proximity to the regional freeway system and likely distribution of traffic if a future tenant is known. Passenger car distribution patterns are based on existing and planned land uses in the area along with the planned circulation system. Exhibit 4-1 illustrates the truck trip distribution patterns for the Project and Exhibit 4-2 illustrates the passenger car trip distribution patterns.

EXHIBIT 4-1: PROJECT (TRUCK) TRIP DISTRIBUTION

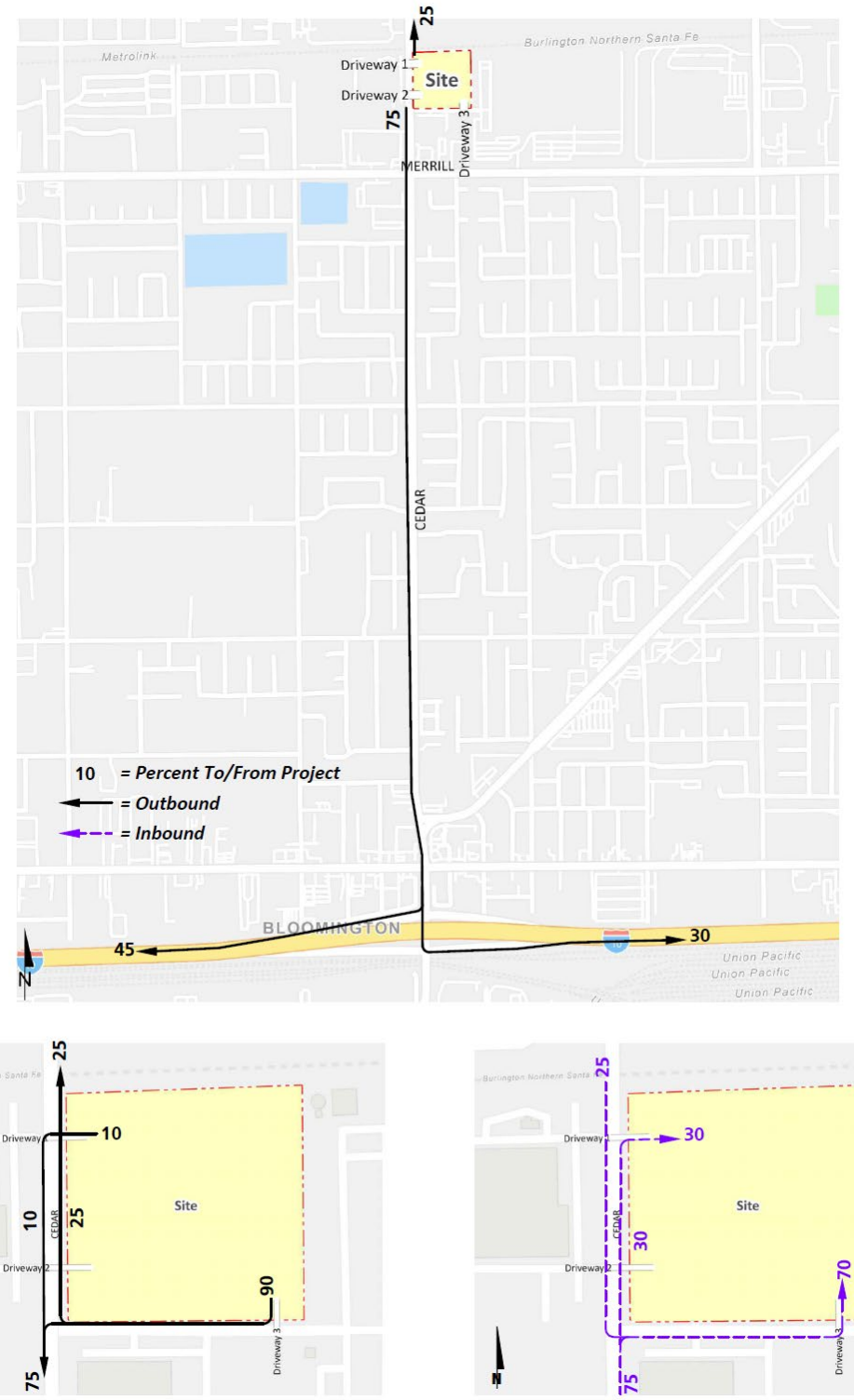
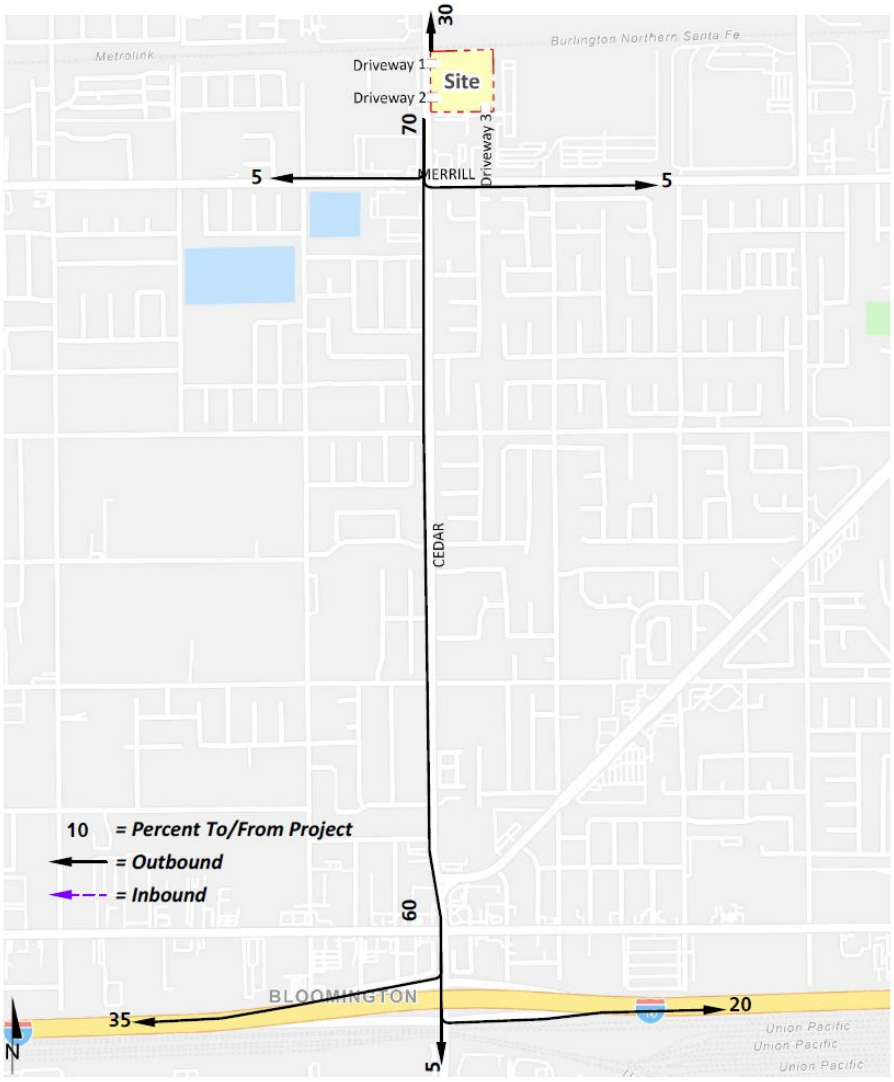
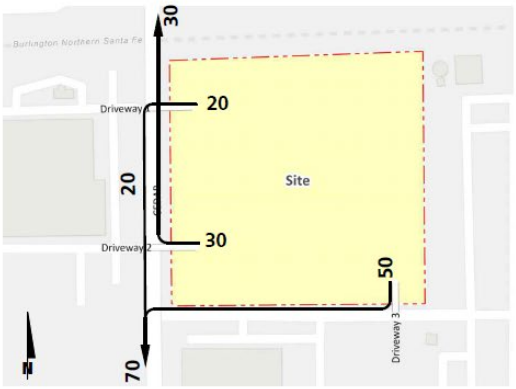


EXHIBIT 4-2: PROJECT (PASSENGER CAR) TRIP DISTRIBUTION







4.3 MODAL SPLIT

The potential for Project trips (non-truck) to be reduced by the use of public transit, walking or bicycling have not been included as part of the Project's estimated trip generation. Essentially, the Project's traffic projections are "conservative" in that these alternative travel modes would reduce the forecasted traffic volumes (non-truck trips only).

4.4 PROJECT TRIP ASSIGNMENT

The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-3.

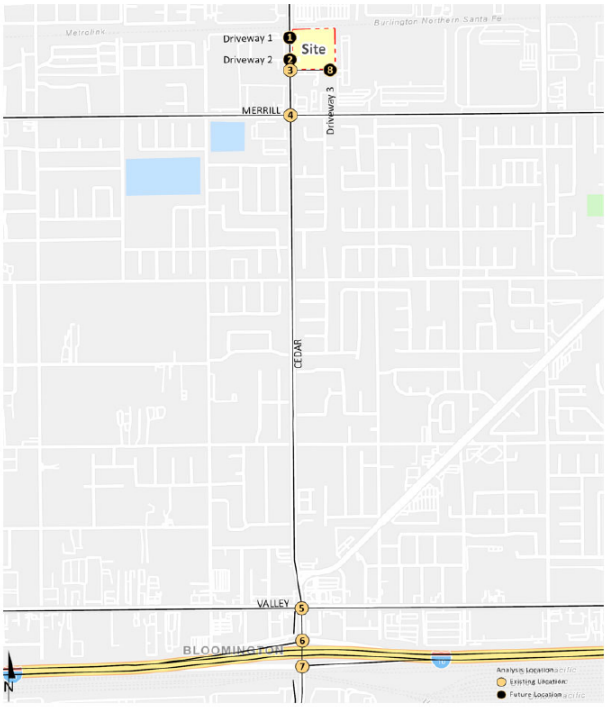
4.5 BACKGROUND TRAFFIC

Future year traffic forecasts have been based upon background (ambient) growth at 2.0% per year, compounded annually. The total ambient growth is 4.04% for 2023 traffic conditions. The ambient growth factor is intended to approximate regional traffic growth. This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies. The traffic generated by the proposed Project is manually added to the base volume to determine EAP/EAPC forecasts.

The near-term traffic analysis includes the following traffic conditions, with the various traffic components:

- EAP (2023)
    - Existing 2021 volumes
    - Ambient growth traffic (4.04% over 2 years)
    - Project Traffic
- EAPC (2023)
    - Existing 2021 volumes
    - Ambient growth traffic (4.04% over 2 years)
    - Project Traffic
    - Cumulative Development traffic

EXHIBIT 4-3: PROJECT ONLY TRAFFIC VOLUMES



1 Cedar Av. & Driveway 1

250 / 150
← 16(6)
↰ 3(9)
↑ 4(16)
↱ 14(5)
150 / 400

2 Cedar Av. & Driveway 2

400 / 200
← 19(15)
↱ 3(10)
↑ 16(11)
↱ 14(5)
150 / 450

3 Cedar Av. & Durst Dr.

450 / 500
← 3(9)
↳ 16(6)
↰ 2(6)
↑ 28(10)
↱ 14(6)
150 / 600

4 Cedar Av. & Merrill Av.

600 / Nominal
↲ 0(2)
← 11(38)
↳ 0(2)
↱ 2(1)
2(1) ↳
↑ 38(15)
Nominal / 550

5 Cedar Av. & Valley Blvd.

550
← 11(38)
↑ 38(15)
150 / 550

6 Cedar Av. & I-10 WB

550 / 100
↲ 6(23)
← 4(16)
↱ 14(5)
↑ 24(9)
150 / 300

7 Cedar Av. & I-10 EB

300 / 100
← 0(2)
↳ 4(14)
23(9) ↳
↑ 2(1)
150 / Nominal

8 Driveway 3 & Durst Dr.

500
↲ 11(38)
30(12) ↳
500

##(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

4.6 CUMULATIVE DEVELOPMENT TRAFFIC

A cumulative project list was developed for the purposes of this analysis through consultation with planning and engineering staff from the City of Rialto. The cumulative projects listed are those that would generate traffic and would contribute traffic to study area intersections. Cumulative projects from the neighboring jurisdictions of Fontana and County of San Bernardino have also been included. Exhibit 4-4 illustrates the cumulative development location map. A summary of cumulative development projects and their proposed land uses are shown on Table 4-3. If applicable, the traffic generated by individual cumulative projects was manually added to the EAPC (2023) forecasts to ensure that traffic generated by the listed cumulative development projects on Table 4-3 are reflected as part of the background traffic. In an effort to conduct a conservative analysis, the cumulative projects are added in conjunction with the ambient growth identified in Section 4.5 *Background Traffic*. Cumulative ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-5 for near-term traffic conditions.

4.7 NEAR-TERM CONDITIONS

The "buildup" approach has been utilized which combines existing traffic counts with a background ambient growth factor to forecast the EAP (2023) and EAPC (2023) traffic conditions. An ambient growth factor of 4.04% accounts for background (area-wide) traffic increases that occur over time up to the year 2023 from the year 2021 (2.0% per year, compounded over a 2-year period). Project traffic is added to assess EAP (2023) and EAPC (2023) traffic conditions, respectively. Traffic volumes generated by cumulative development projects are included to assess the EAPC (2023) traffic conditions. The 2023 roadway networks are similar to the existing conditions roadway network with the exception of future roadways and intersections proposed to be developed by the Project. It should be noted that Existing plus Ambient Growth plus Cumulative (EAC) traffic forecasts were also developed for applicable County of San Bernardino study area intersections only to determine the change in delay and identify whether the Project has an adverse effect on a pre-project deficiency.

EXHIBIT 4-4: CUMULATIVE DEVELOPMENT LOCATION MAP

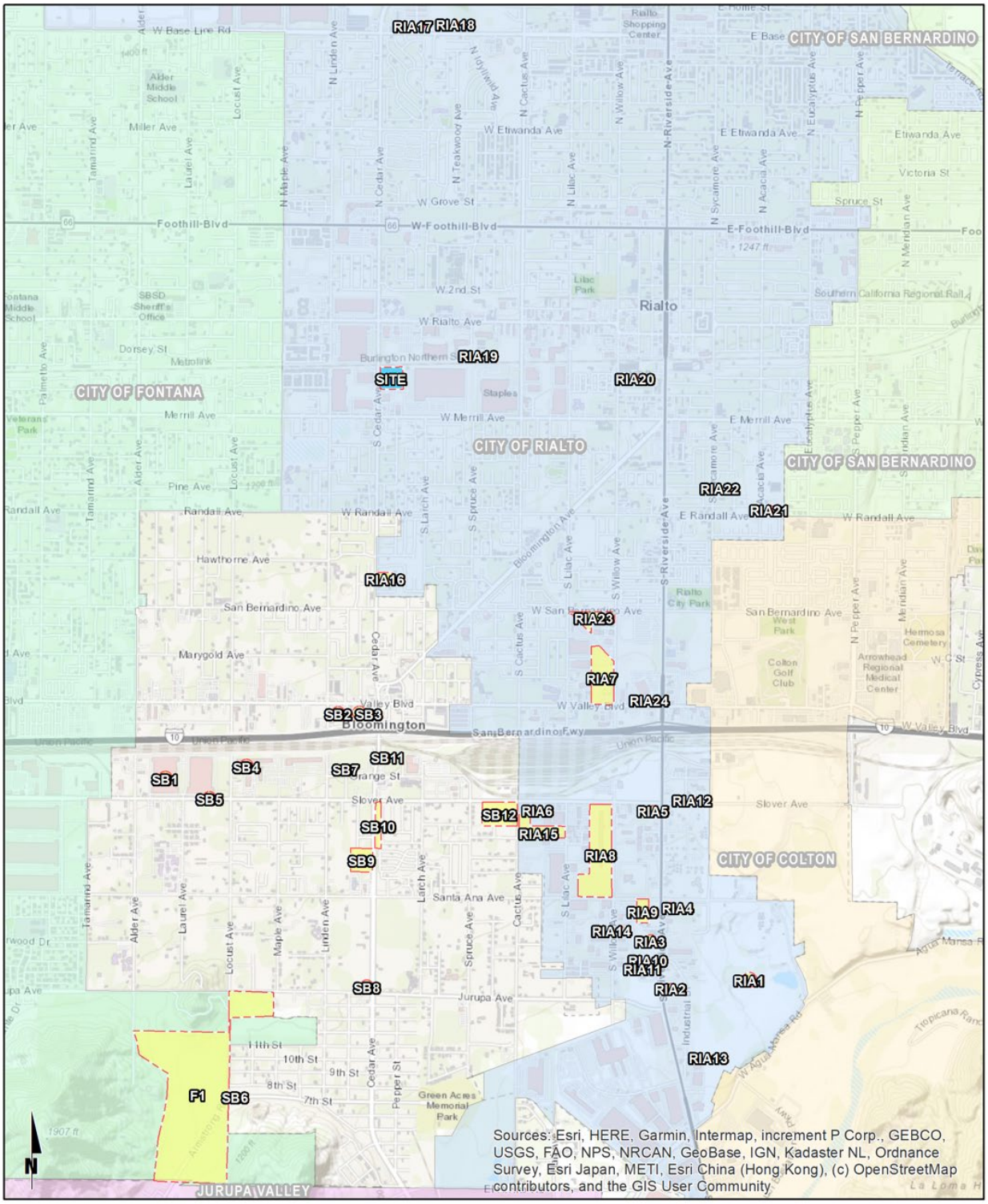
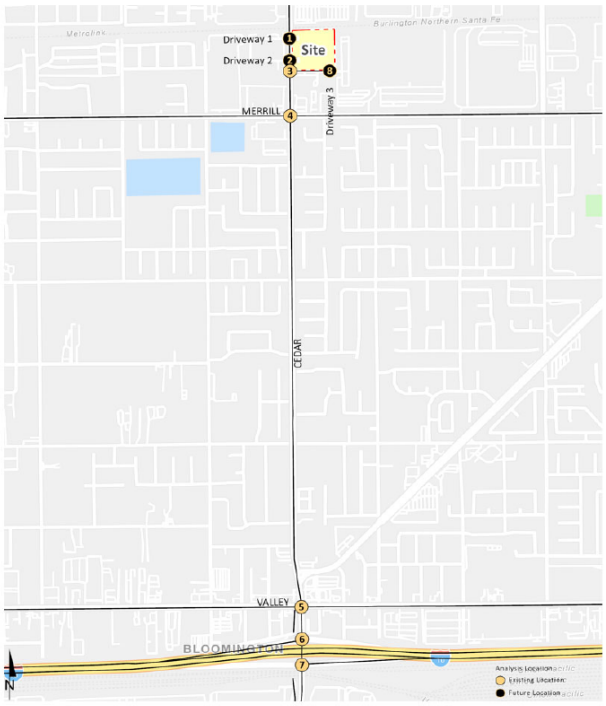
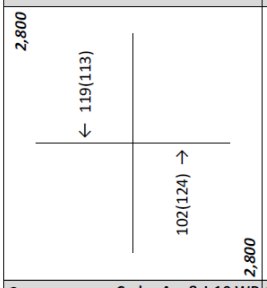


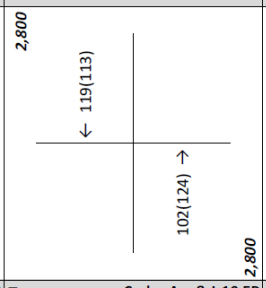
EXHIBIT 4-5: CUMULATIVE ONLY TRAFFIC VOLUMES



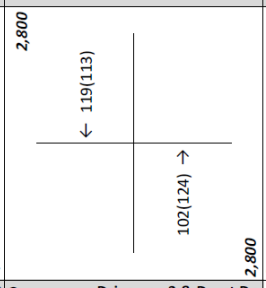
1 Cedar Av. & Driveway 1



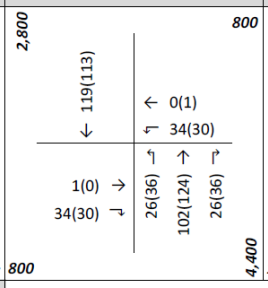
2 Cedar Av. & Driveway 2



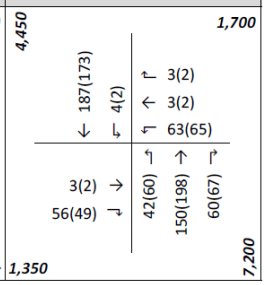
3 Cedar Av. & Durst Dr.



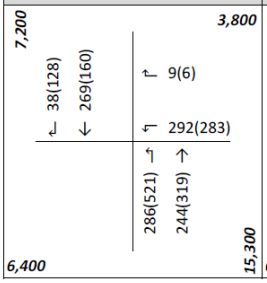
4 Cedar Av. & Merrill Av.



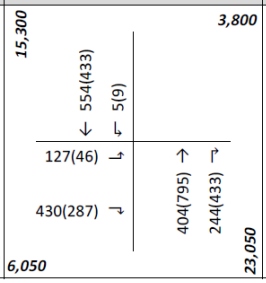
5 Cedar Av. & Valley Blvd.



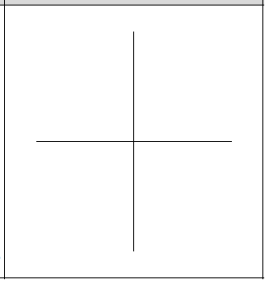
6 Cedar Av. & I-10 WB



7 Cedar Av. & I-10 EB



8 Driveway 3 & Durst Dr.



##(##) AM(PM) Peak Hour Intersection Volumes

***Average Daily Trips***

TABLE 4-3: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

ID	Project Name	Land Use	Quantity	Units[1]
City of Rialto:				
RIA1	South of Santa Ana Av., East of Riverside Av.	Warehouse	370.000	TSF
RIA2	SEC of Riverside Av. and Industrial Dr.	Trucking	3.580	AC
RIA3	NWC of Riverside Av. and Industrial Dr.	Truck Drop	3.360	AC
RIA4	SEC of Riverside Av. and Santa Ana Av.	Super Convenience Market/Gas Station	16	VFP
		Diesel Station	2	VFP
RIA5	SWC of Riverside Av. & Slover Av.	Fast Food w/ Drive-Thru	5.200	TSF
RIA6	Flyers Energy Addition	Warehouse	9.350	TSF
RIA7	Valley/Willow Warehouse	Warehousing	492.410	TSF
RIA8	Old Dominion Expansion	Parking Lot (407 spaces)	17.780	AC
RIA9	SC Fuels	Fuel Storage/Service	54.460	TSF
RIA10	Lynn Trucking	Truck Parking Yard	3.070	AC
		Car Wash/Repair	8.827	TSF
RIA11	Riverside Pallet Yard	Pallet Yard	3.580	AC
RIA12	Onyx Paving	Contractor's Yard	0.770	AC
RIA13	Angelus Black - Concrete Block	Manufacturing	178.475	TSF
RIA14	Bakery Addition	Bakery	14.000	TSF
RIA15	Lilac Avenue Warehouse	Truck Terminal	47.609	TSF
RIA16	Cedar Villas	Single Family Residential	22.000	DU
RIA17	Olive Avenue Development Project	Warehouse	679.607	TSF
RIA18	Fitzgerald Avenue Warehouse	Warehouse	45.659	TSF
RIA19	165 S. Spruce Avenue	Warehouse	86.050	TSF
RIA20	Tract 20199 – The Depot	Single Family Residential	56	DU
RIA21	Tract 20237 – Seasons at Acacia	Single Family Residential	52	DU
RIA22	Tract 20108 – Sycamore Glen	Single Family Residential	30	DU
RIA23	Willow Avenue Warehouse Project	Warehouse	128.819	TSF
RIA24	Rialto/Gateway Phase 2	3 drive-thrus, 1 car wash, retail	120	TSF
County of San Bernardino:				
SB1	NWC of Slover Av. and Locust Av.	Fast Food Restaurant With Drive-Thru	3.265	TSF
		Retail Store	7.200	TSF
		Warehouse	20.750	TSF
SB2	SEC of Linden Av. and Valley Bl.	Fast Food Restaurant	1.500	TSF
SB3	Valley Bl., West of Linden Av.	Office Building	0.250	AC
SB4	Linden Av., north of Slover Av.	Tire Store	3.000	TSF
SB5	Slover Av. between Locust Av. and Laurel Av.	High-Cube Warehouse	344.000	TSF
SB6	Locust Av. and 7th St.	Single Family Residential	198	DU
SB7	NEC and NWC of Cedar Av. and Orange St.	Warehouse	395.000	TSF
SB8	NWC of Cedar Av. and Jurupa Av.	High-Cube Warehouse	677.000	TSF
SB9	Cedar Truck Yard	Truck Storage	8.940	AC
SB10	Cedar / Slover Retail	Super Convenience Market/Gas Station	12	VFP
		Automated Car Wash	1.000	Tunnel
		Fast Food Restaurant With Drive-Thru	9.907	TSF
SB11	Cedar Avenue Technology Center	Warehouse	184.770	TSF
SB12	Cactus and Slover Warehouse	Warehouse	257.855	TSF
City of Fontana:				
F1	West Valley Logistics Center	High-Cube Transload & Short-Term Storage	3183.100	TSF
		Warehouse	290.590	TSF

[1] DU = Dwelling Units; TSF = Thousand Square Feet; AC = Acres; VFP = Vehicle Fueling Positions

5 EAP (2023) TRAFFIC CONDITIONS

This section discusses the traffic forecasts for Existing plus Ambient Growth plus Project (EAP) conditions and the resulting intersection operations, traffic signal warrant, and off-ramp queuing analyses.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for EAP conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for EAP conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways).

5.2 EAP (2023) TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 2.0% and the addition of Project traffic. The weekday ADT, weekday AM, and PM peak hour volumes which can be expected for EAP (2023) traffic conditions are shown on Exhibit 5-1.

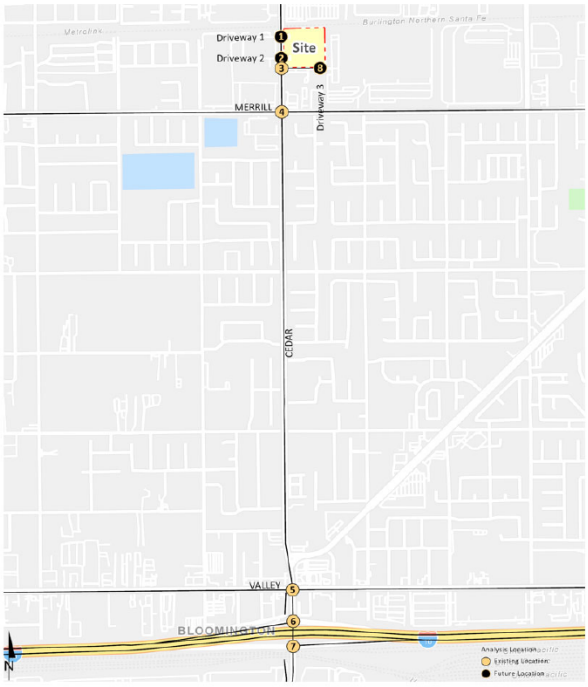
5.3 INTERSECTION OPERATIONS ANALYSIS

EAP (2023) peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TA. The intersection analysis results are summarized on Table 5-1 for EAP (2023) traffic conditions, which shows the following study area intersection is anticipated to operate at an unacceptable LOS during one or more peak hours:

- Cedar Avenue & Durst Drive (#3) – LOS E PM peak hour only

The intersection operations analysis worksheets for EAP (2023) traffic conditions are included in Appendix 5.1 of this TA.

EXHIBIT 5-1: EAP (2023) TRAFFIC VOLUMES



1 Cedar Av. & Driveway 1

28,850 | *150* | *29,000*

← 1141(991)

↰ 3(9)

↑ 857(1091)

↱ 14(5)

2 Cedar Av. & Driveway 2

29,000 | *200* | *29,000*

← 1144(1000)

↱ 3(10)

↑ 869(1086)

↱ 14(5)

3 Cedar Av. & Durst Dr.

30,900 | *1,650* | *29,450*

← 1112(989)

↳ 32(11)

↰ 6(33)

↰ 15(73)

↑ 877(1058)

↱ 50(17)

4 Cedar Av. & Merrill Av.

28,450 | *13,300* | *24,850*

↲ 88(90)

← 766(780)

↳ 183(154)

↱ 99(132)

← 271(228)

↰ 59(53)

134(134) ↳

198(351) →

25(82) ↲

↰ 66(72)

↑ 626(776)

↱ 38(41)

13,250

5 Cedar Av. & Valley Blvd.

35,300 | *16,500* | *46,600*

↲ 21(74)

← 1106(957)

↳ 40(79)

↱ 31(63)

← 242(251)

↰ 324(252)

55(268) ↳

153(407) →

482(474) ↲

↰ 323(361)

↑ 1013(1117)

↱ 244(209)

25,450

6 Cedar Av. & I-10 WB

46,600 | *8,900* | *38,950*

↲ 615(526)

← 1295(1158)

↱ 390(412)

← 1(1)

↰ 395(225)

↰ 215(152)

↑ 1190(1274)

9,250

7 Cedar Av. & I-10 EB

38,950 | *9,850* | *32,550*

← 1290(992)

↳ 400(391)

420(536) ↳

3(7) →

303(143) ↲

↑ 986(891)

↱ 379(319)

9,550

8 Driveway 3 & Durst Dr.

500 | *1,150* | *1,650*

↲ 11(38)

← 10(68)

30(12) ↳

52(17) →

##(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

TABLE 5-1: INTERSECTION ANALYSIS FOR EAP (2023) CONDITIONS

#	Intersection	Traffic Control[2]	Existing (2021) Delay[1] (secs.) AM	PM	Level of Service AM	PM	EAP (2023) Delay[1] (secs.) AM	PM	Level of Service AM	PM
1	Cedar Av. & Driveway 1	**CSS**	Future Intersection				18.9	23.6	C	C
2	Cedar Av. & Driveway 2	**CSS**	Future Intersection				12.1	13.6	B	B
3	Cedar Av. & Durst Dr.	CSS	19.7	27.4	C	D	21.1	**42.5**	C	**E**
4	Cedar Av. & Merrill Av.	TS	20.4	20.4	C	C	22.7	22.2	C	C
5	Cedar Av. & Valley Blvd.	TS	34.1	44.5	C	D	35.3	46.9	D	D
6	Cedar Av. & I-10 WB	TS	33.4	21.6	C	C	35.1	22.6	D	C
7	Cedar Av. & I-10 EB	TS	34.6	30.4	C	C	37.3	33.3	C	C
8	Driveway 3 & Durst Dr.	**CSS**	Future Intersection				8.4	9.1	A	A

BOLD = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

1 Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

2 CSS = Cross-street Stop; TS = Traffic Signal; **CSS** = Improvement

5.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

The following study area intersection is anticipated to meet a peak hour volume-based traffic signal warrant for EAP (2023) traffic conditions:

- Cedar Avenue & Durst Drive (#3)

The signal warrant worksheets for EAP (2023) traffic conditions are included in Appendix 5.2 of this TA.

5.5 OFF-RAMP QUEUING ANALYSIS

Queuing analysis findings for EAP (2023) are presented on Table 5-2. As shown on Table 5-2, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows with the addition of Project traffic. Worksheets for EAP (2023) traffic conditions off-ramp queuing analysis are provided in Appendix 5.3.

TABLE 5-2: PEAK HOUR FREEWAY OFF-RAMP QUEUING SUMMARY FOR EAP (2023) CONDITIONS

#	Intersection	Movement	Available Stacking Distance (Feet)	95th Percentile Queue (Feet)		Acceptable? [1]	
				AM Peak Hour	PM Peak Hour	AM	PM
6	Cedar Av. & I-10 WB Ramps	WBL/T/R	1,270	520 [2]	398 [2]	Yes	Yes
		WBR	480	294	326	Yes	Yes
7	Cedar Av. & I-10 EB Ramps	EBL	475	384	455 [2]	Yes	Yes
		EBL/T/R	1,900	362	371	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

5.6 PROJECT DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

5.6.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

The effectiveness of the recommended improvement strategies to address EAP (2023) traffic deficiencies are presented on Table 5-3. Worksheets for EAP (2023) conditions, with improvements, HCM calculation worksheets are provided in Appendix 5.4. The implementation of the improvement identified in Table 5-3 would address both the AM and PM peak hour deficiencies.

TABLE 5-3: INTERSECTION ANALYSIS FOR EAP (2023) CONDITIONS WITH IMPROVEMENTS

#	Intersection	Traffic Control [3]	Intersection Approach Lanes [1]												Delay [2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
3	Cedar Av. & Durst Dr.																	
	Without Improvements	CSS	0	2	0	1	2	0	0	0	0	0	1	0	21.1	**42.5**	C	**E**
	With Improvements	**TS**	0	2	0	1	2	0	0	0	0	0	1	0	6.8	9.4	A	A

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; **1** = Improvement

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross-Street Stop; TS = Traffic Signal; **TS** = Improvement

5.6.2 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES ON OFF-RAMP QUEUES

As shown on Table 5-2, there are no peak hour queuing issues at the study area interchanges for EAP (2023) traffic conditions. As such, no improvements have been recommended.

6 EAPC (2023) TRAFFIC CONDITIONS

This section discusses the methods used to develop Existing plus Ambient Growth plus Project plus Cumulative (EAPC) (2023) traffic forecasts, and the resulting intersection operations, traffic signal warrant, and off-ramp queuing analyses.

6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for EAPC (2023) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for EAPC conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for EAPC conditions only.

6.2 EAPC (2023) TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 4.04% in conjunction with the addition of cumulative project development and Project traffic. The weekday ADT, weekday AM, and PM peak hour volumes which can be expected for EAPC (2023) traffic conditions are shown on Exhibit 6-1.

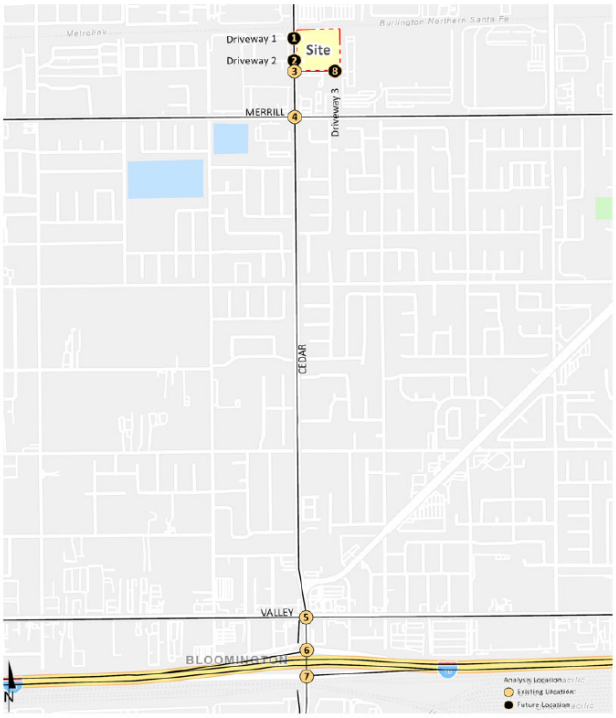
6.3 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under EAPC (2023) traffic conditions with roadway and intersection geometrics consistent with Section 6.1 *Roadway Improvements*. As shown on Table 6-1, the following study area intersections are anticipated to operate at an unacceptable LOS under EAPC (2023) traffic conditions:

- Cedar Avenue & Durst Drive (#3) - LOS F PM peak hour
- Cedar Avenue & Valley Boulevard (#5) - LOS E PM peak hour
- Cedar Avenue & I-10 Westbound Ramps (#6) – LOS F AM and PM peak hours
- Cedar Avenue & I-10 Eastbound Ramps (#7) – LOS F AM and PM peak hours

EAC (2023) traffic forecasts were also developed to determine the change in delay and identify whether the Project has an adverse effect on a pre-project deficiency. The EAC traffic forecasts used for the operations analysis can be found in Appendix 6.1. The intersection operations analysis worksheets for EAC (2023) and EAPC (2023) traffic conditions are included in Appendix 6.1 and Appendix 6.2, respectively.

EXHIBIT 6-1: EAPC (2023) TRAFFIC VOLUMES



1 Cedar Av. & Driveway 1

31,650 | 150

← 1259(1104)

↰ 3(9)

↑ 959(1215)

↱ 14(5)

31,800

2 Cedar Av. & Driveway 2

31,800 | 200

← 1262(1113)

↱ 3(10)

↑ 971(1210)

↱ 14(5)

31,800

3 Cedar Av. & Durst Dr.

33,700 | 1,650

← 1231(1102)

↳ 32(11)

↰ 6(33)

↰ 15(73)

↑ 979(1182)

↱ 50(17)

32,300

4 Cedar Av. & Merrill Av.

31,250 | 14,100

↲ 88(90)

↓ 885(892)

↳ 183(154)

134(134) ↴

199(351) →

59(112) ↴

↰ 99(132)

← 271(229)

↰ 94(83)

↰ 91(108)

↑ 728(900)

↱ 64(77)

14,050

29,200

5 Cedar Av. & Valley Blvd.

39,750 | 18,150

↲ 21(74)

← 1293(1129)

↳ 44(81)

55(268) ↴

156(409) →

538(524) ↴

↰ 34(65)

← 245(253)

↰ 387(317)

↰ 365(421)

↑ 1163(1315)

↱ 305(276)

26,800

53,800

6 Cedar Av. & I-10 WB

12,700

↲ 653(654)

← 1564(1318)

↱ 399(418)

← 1(1)

↰ 687(508)

↰ 501(673)

↑ 1434(1593)

15,700

54,250

7 Cedar Av. & I-10 EB

54,250 | 13,650

← 1844(1425)

↳ 405(400)

547(582) ↴

3(7) →

733(430) ↴

↑ 1390(1686)

↱ 623(752)

15,600

55,550

8 Driveway 3 & Durst Dr.

500 | 1,150

↲ 11(38)

← 10(68)

30(12) ↴

52(17) →

1,650

##(##) AM(PM) Peak Hour Intersection Volumes

***Average Daily Trips***

TABLE 6-1: INTERSECTION ANALYSIS FOR EAPC (2023) CONDITIONS

#	Intersection	Traffic Control[2]	EAC (2023) Delay[1] (secs.) AM	EAC (2023) Delay[1] (secs.) PM	EAC (2023) Level of Service AM	EAC (2023) Level of Service PM	EAPC (2023) Delay[1] (secs.) AM	EAPC (2023) Delay[1] (secs.) PM	EAPC (2023) Level of Service AM	EAPC (2023) Level of Service PM
1	Cedar Av. & Driveway 1	CSS	Future Intersection				21.0	27.2	C	D
2	Cedar Av. & Driveway 2	CSS	Future Intersection				12.8	14.6	B	B
3	Cedar Av. & Durst Dr.	CSS	19.7	29.8	C	D	24.0	**60.3**	C	**F**
4	Cedar Av. & Merrill Av.	TS	26.0	28.8	C	C	27.8	30.4	C	C
5	Cedar Av. & Valley Blvd.	TS	43.5	**58.9**	D	**E**	44.0	**60.7**	D	**E**
6	Cedar Av. & I-10 WB	TS	**90.6**	**99.5**	**F**	**F**	**90.8**	**99.8**	**F**	**F**
7	Cedar Av. & I-10 EB	TS	**99.5**	**78.8**	**F**	**E**	**104.0**	**81.7**	**F**	**F**
8	Driveway 3 & Durst Dr.	CSS	Future Intersection				8.4	9.1	A	A

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[2] CSS = Cross-street Stop; TS = Traffic Signal; **CSS** = Improvement

6.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

There are no additional study area intersections anticipated to meet a peak hour volume-based or ADT-based traffic signal warrants for EAPC (2023) traffic conditions in addition to those previously warranted under EAP traffic conditions (see Appendix 6.3).

6.5 OFF-RAMP QUEUING ANALYSIS

Queuing analysis findings for EAPC (2023) traffic conditions are shown on Table 6-2. As shown on Table 6-2, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows under EAPC (2023) traffic conditions. Worksheets for EAPC (2023) traffic conditions off-ramp queuing analysis are provided in Appendix 6.4.

TABLE 6-2: PEAK HOUR FREEWAY OFF-RAMP QUEUING SUMMARY FOR EAPC (2023) CONDITIONS

#	Intersection	Movement	Available Stacking Distance (Feet)	95th Percentile Queue (Feet)		Acceptable? [1]	
				AM Peak Hour	PM Peak Hour	AM	PM
6	Cedar Av. & I-10 WB Ramps	WBL/T/R	1,270	1,067 [2]	904 [2]	Yes	Yes
		WBR	480	351	494 [2]	Yes	Yes
7	Cedar Av. & I-10 EB Ramps	EBL	475	697 [2,3]	830 [2,3]	Yes	Yes
		EBL/T/R	1,900	1,216	793 [2]	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-10 Freeway mainline.

6.6 RECOMMENDED IMPROVEMENTS

This section provides a summary of Project deficiencies and recommended improvements. Based on the City of Rialto and County of San Bernardino deficiency criteria discussed in Section 2.7 *Deficiency Criteria*, the following intersections were found to be deficient.

6.6.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

The effectiveness of the recommended improvement strategies to address EAPC (2023) traffic deficiencies are presented on Table 6-3. The Project Applicant shall contribute to these improvements through payment of regional DIF fees or fair share contribution as identified on Table 1-3. Worksheets for EAPC (2023) conditions, with improvements, HCM calculation worksheets are provided in Appendix 6.5.

TABLE 6-3: INTERSECTION ANALYSIS FOR EAPC (2023) CONDITIONS WITH IMPROVEMENTS

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1] Northbound L	T	R	Southbound L	T	R	Eastbound L	T	R	Westbound L	T	R	Delay[2] (secs.) AM	PM	Level of Service AM	PM
3	Cedar Av. & Durst Dr.																	
	Without Improvements	CSS	0	2	0	1	2	0	0	0	0	0	1	0	24.0	**60.3**	C	**F**
	With Improvements	**TS**	0	2	0	1	2	0	0	0	0	0	1	0	7.2	10.2	A	B
5	Cedar Av. & Valley Blvd																	
	Without Improvements	TS	2	2	1	2	3	0	2	1	2	2	2	0	44.0	**60.7**	D	**E**
	With Improvements	TS	2	**3**	0	2	3	0	2	**2**	1	2	2	0	48.8	46.6	D	D
6	Cedar Av. & I-10 WB																	
	Without Improvements	TS	1	2	0	0	3	1	0	0	0	0	1	1	**90.8**	**99.8**	**F**	**F**
	With Improvements	TS	**2**	2	0	0	3	1	0	0	0	0	1	1	50.9	42.4	D	D
7	Cedar Av. & I-10 EB																	
	Without Improvements	TS	0	3	1	1	2	0	1	1	0	0	0	0	**104.0**	**81.7**	**F**	**F**
	With Improvements	TS	0	3	1	**2**	2	0	1	1	**1**	0	0	0	35.1	31.6	D	C

* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; **1** = Improvement

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross-Street Stop; TS = Traffic Signal; **TS** = Improvement

6.6.2 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES ON OFF-RAMP QUEUES

As shown previously on Table 6-2, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows for EAPC (2023) traffic conditions. As such, no improvements have been recommended.

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7 LOCAL AND REGIONAL FUNDING MECHANISMS

Transportation improvements within the City of Rialto are funded through a combination of direct project mitigation, development impact fee programs or fair share contributions, such as the City of Rialto Development Impact Fee (DIF) program. Identification and timing of needed improvements is generally determined through local jurisdictions based upon a variety of factors.

7.1 CITY OF RIALTO DEVELOPMENT IMPACT FEE PROGRAM

In 2006, the City of Rialto adopted their DIF program incorporating the regional component of Measure I. The fee schedule was updated in June 2021. Fees from new residential, commercial and industrial development are collected to fund Measure I compliant regional facilities. Under the City's DIF program, the City may grant to developers a credit against specific components of fees when those developers construct certain facilities and landscaped medians identified in the list of improvements funded by the DIF program.

After the City's DIF fees are collected, they are placed in a separate interest-bearing account pursuant to the requirements of Government Code sections 66000 *et seq*. The timing to use the DIF fees is established through periodic capital improvement programs which are overseen by the City's Public Works Department. Periodic traffic counts, review of traffic accidents, and a review of traffic trends throughout the City are also periodically performed by City staff and consultants. The City uses this data to determine the timing of the improvements listed in its facilities list.

7.2 MEASURE "I" FUNDS

In 2004, the voters of San Bernardino County approved the 30-year extension of Measure "I", a one-half of one percent sales tax on retail transactions, through the year 2040, for transportation projects including, but not limited to, infrastructure improvements, commuter rail, public transit, and other identified improvements. The Measure "I" extension requires that a regional traffic impact fee be created to ensure development is paying its fair share. A regional Nexus study was prepared by the SBCTA and concluded that each jurisdiction should include a regional fee component in their local programs in order to meet the Measure "I" requirement. The regional component assigns specific facilities and cost sharing formulas to each jurisdiction and was most recently updated in November 2011. Revenues collected through these programs are used in tandem with Measure "I" funds to deliver projects identified in the Nexus Study. While Measure "I" is a self-executing sales tax administered by SBCTA, it bears discussion here because the funds raised through Measure "I" have funded in the past and will continue to fund new transportation facilities in San Bernardino County.

7.3 FAIR SHARE CONTRIBUTION

Project improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair share contribution toward future improvements or a combination of these approaches. Improvements constructed by development may be eligible for a fee credit or reimbursement through the program where appropriate (to be determined at the City's discretion).

When off-site improvements are identified with a minor share of responsibility assigned to proposed development, the approving jurisdiction may elect to collect a fair share contribution or require the development to construct improvements. Detailed fair share calculations, for each peak hour, has been provided on Table 7-1 for the applicable deficient study area intersections.

As discussed previously in Section 1.6 *Recommendations*, based on the Project fair share percentages shown in Table 7-1, the Project shall pay the following fair share for the improvements identified in Table 1-3:

- City of Rialto: $116,442
- County of San Bernardino: $48,581
- Caltrans: $5,235

TABLE 7-1: PROJECT FAIR SHARE CALCULATIONS

#	Intersection		Existing	Project	EAPC 2023	Total New Traffic	Project % of New Traffic
3	Cedar Av. & Durst Dr.						
		AM:	1,942	72	2,313	371	**19.4%**
		PM:	2,030	69	2,418	388	17.8%
5	Cedar Av. & Valley Blvd						
		AM:	3,829	49	4,606	777	**6.3%**
		PM:	4,286	53	5,132	846	6.3%
6	Cedar Av. & I-10 WB Ramps						
		AM:	3,896	48	5,239	1,343	**3.6%**
		PM:	3,551	53	5,164	1,613	3.3%
7	Cedar Av. & I-10 EB Ramps						
		AM:	3,607	29	5,546	1,939	**1.5%**
		PM:	3,127	26	5,282	2,155	1.2%

BOLD = Denotes highest fair share percentage.

8 VEHICLE MILES TRAVELED

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which requires all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the new measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020. To aid in the transition from LOS to VMT, the Governor's Office of Planning and Research (OPR) published its Technical Advisory on Evaluating Transportation Impacts in CEQA (**Technical Advisory**). (4) It is our understanding that the City of Rialto is currently in development of their own VMT analysis guidelines and impact thresholds, therefore, the San Bernardino County Transportation Impact Study Guidelines (July 2019) (**County Guidelines**) (5) are to be utilized until such time the City formally adopts their own.

8.1 VMT ANALYSIS

Urban Crossroads initially reviewed applicable VMT screening criteria as identified in the Technical Advisory and determined that the Project could not be screened from VMT analysis based on applicable screening criteria (i.e., local serving retail or other local serving land use type, generates fewer than 110 trips per day, transit priority area, etc.). A VMT analysis has been performed based on County Guidelines.

The County Guidelines provides details on appropriate "screening thresholds" that can be used to identify when a proposed land use project is anticipated to result in a less-than-significant impact without conducting a more detailed analysis. Screening thresholds are broken into the following three types:

- Project Type Screening
- Transit Priority Area (TPA) Screening
- Low VMT Area Screening

A land use project need only to meet one of the above screening thresholds to result in a less than significant impact.

8.2 PROJECT TYPE SCREENING CRITERIA

Consistent with County Guidelines and the Technical Advisory, local serving uses such as day care centers, retail uses under 50,000 sf, community institutions, affordable housing, and projects that generate fewer than 110 daily vehicle trips. Trips generated by the Project's proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition, 2012. (8) The proposed Project is anticipated to generate a total of 840 vehicle trip-ends per day, exceeding the 110 daily vehicle trips threshold (see Table 4-2).

Project Type screening criteria is not met.

8.3 TPA SCREENING

Consistent with guidance identified in the Technical Advisory, County Guidelines note that projects located within a Transit Priority Area (TPA) (i.e., within ½ mile of an existing "major transit stop"[1] or an existing stop along a "high-quality transit corridor"[2]) may be presumed to have a less than significant impact absent substantial evidence to the contrary. The presumption may not be appropriate if a project:

- Has a Floor Area Ratio (FAR) of less than 0.75;
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

The Project site is not located within ½ mile of an existing major transit stop, or along a high-quality transit corridor (see Appendix 8.1).

TPA screening threshold is not met.

8.4 LOW VMT AREA SCREENING

As noted in the County Guidelines, "Projects located within a low VMT generating area as determined by the analyst (e.g., development in efficient areas of the County will reduce VMT per person/employee and is beneficial to the region."[3] The Screening Tool uses the sub-regional San Bernardino Transportation Analysis Model (SBTAM) to measure VMT performance within individual traffic analysis zones (TAZ's) within the region. The Project's physical location, based on parcel location, is input into the Screening Tool to determine project generated VMT. The Project was found to reside in TAZ 53748701. A review of the socio-economic data contained within TAZ 53748401 was found to include employment consistent with the proposed Project. County guidelines state that employment projects are to utilize VMT per employee for all home-based-work trips (attractions).[4] The County Guidelines continues "A project should be considered to have a significant impact if the project VMT per employee is greater than 4% below the existing VMT per employee for the County".[5] The Project is replacing an existing industrial use. Examining further, the existing socio-economic data contained within SBTAM shows employment types

[1] Pub. Resources Code, § 21064.3 ("'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.").

[2] Pub. Resources Code, § 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").

[3] County Guidelines; Page 19

[4] County Guidelines; Page 19

[5] County Guidelines; Page 21

consistent with the Project's proposed land use. Based on screening tool results the Project was found to be located within a low VMT area (see Appendix 8.1).

Low VMT Area screening criteria is met.

8.5 CONCLUSION

The Project was found to meet the Low VMT area screening criteria. The project is consistent with City of Rialto's General Plan and as stated in the County Guidelines "Cumulative impacts should be evaluated for consistency with the adopted RTP/SCS. For example, if a project is included in the RTP/SCS, the project's cumulative impacts shall be less-than significant." As previously mentioned, the Project resides in an already low VMT area and is not anticipated to increase congestion along major corridors. The Project's VMT impact is therefore anticipated to be less than significant. Further VMT analysis is not required based on the current San Bernardino County guidance. As the City of Rialto is currently developing agency specific VMT guidelines and thresholds. These findings may be subject to change once the City adopts its own VMT methodology and thresholds.

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9 REFERENCES

1. **City of Rialto Public Works Department.** *Traffic Impact Analysis Report Guidelines and Requirements.* City of Rialto : s.n., December 2013 (Adopted February 5, 2014).

2. **County of San Bernardino.** *Transportation Impact Study Guidelines.* County of San Bernardino : s.n., July 9, 2019.

3. **San Bernardino Associated Governments.** *Congestion Management Program for County of San Bernardino.* County of San Bernardino : s.n., Updated June 2016.

4. **Office of Planning and Research.** *Technical Advisory on Evaluating Transportation Impacts in CEQA.* State of California : s.n., December 2018.

5. **San Bernardino County.** *Transportation Impact Study Guidelines.* July 2019.

6. **Transportation Research Board.** *Highway Capacity Manual (HCM).* 6th Edition. s.l. : National Academy of Sciences, 2016.

7. **California Department of Transportation.** California Manual on Uniform Traffic Control Devices (CA MUTCD). [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CA MUTCD).* 2014.

8. **Institute of Transportation Engineers.** *Trip Generation Manual.* 9th Edition. 2012.

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APPENDIX 1.1:

APPROVED TRAFFIC STUDY SCOPING AGREEMENT

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Exhibit B

SCOPING AGREEMENT FOR TRAFFIC IMPACT ANALYSIS

This following form shall be used to acknowledge preliminary approval of the scope for the traffic impact analysis (TIA) of the following project. The TIA must follow the City of Rialto Traffic Impact Analysis – Report Guidelines and Requirements, adopted by the City Council on February 5, 2014.

City of Rialto

Traffic Impact Analysis

Scoping Agreement

Case No. MC 2021-0042, PPD 2021-0036

Related Cases -

SP No. _____

EIR No. _____

GPA No. _____

ZC No. _____

Project Name: Durst Warehouse (APN No. 1280-622-5, -6, -7)

Project Address: 1230 Durst Drive

Project Description: 235,000 square feet of warehousing use

	Consultant	Developer
Name:	Charlene So, Urban Crossroads, Inc.	Black Creek Group
Address:	1133 Camelback St, #8329	4675 MacArthur Court, Suite 625
Telephone:	Newport Beach, CA 92658	Newport Beach, CA 92660
Fax:		

1. Trip Generation Source: ITE Trip Generation Manual, 9th Edition (2012) + Rialto Vehicle Mix

Existing GP Land Use Light Industrial (LI) Proposed Land Use Light Industrial (LI)

Current Zoning: Geneard Manufacturing (M2) Proposed Zoning: General Manufacutring (M2)

Total Daily Project Trips: 1,406 (PCE)

	Current Trip Generation			Proposed Trip Generation (PCE)		
	In	Out	Total	In	Out	Total
AM Trips	No Credit Taken although has a vacated use (Southland Pipe Corporation)			96	26	122
PM Trips				34	96	130

Internal Trip Allowance Yes ✓No (_____ % Trip Discount)

Pass-By Trip Allowance Yes ✓No (_____ % Trip Discount)

For appropriate land uses, a pass-by trip discount may be allowed not to exceed 25%. Discount trips shall be indicated on a report figure for intersections and access locations.

2. Trip Geographic Distribution: N % S % E % W % (varies)

(Detailed exhibits of trip distribution must be attached with Trucks as a separate exhibit)

3. Background Growth Traffic

Project Completion Year: 2023 Annual Background Growth Rate: 2.0 %

Other Phase Years Not Applicable

Other area projects to be considered: _____

(Contact Planning for Lists. Correlate projects to exhibit map and also indicate which projects have been included in study area forecasts for existing + background growth + project + cumulative)

Model/Forecast methodology: Not Applicable

4. Study Intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies received.)

1. Cedar Av. & Driveway 1
2. Cedar Av. & Driveway 2
3. Cedar Av. & Durst Dr.
4. Cedar Av. & Merrill Av.
5. Cedar Av. & Valley Bl.
6. Cedar Av. & I-10 WB Ramps
7. Cedar Av. & I-10 EB Ramps
8. Driveway 3 & Durst Dr.
9. _____
10. _____

5. Study Roadway Segments: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies received.)

1. Not Applicable
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

6. Other Jurisdictional Impacts

Is this project within any other Agency's Sphere of Influence or within one-mile of another jurisdictional boundary? ✓ YES _____ NO

If so, name of Jurisdiction: County of San Bernardino, Caltrans (2-miles)

7. Site Plan (please attach 11" x 17" legible copy)

8. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (to be filled out by the City of Rialto Public Works Department) (NOTE: If the traffic study states that "a traffic signal is warranted" (or "a traffic signal appears to be warranted," or similar statement) at an existing un-signalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.)

1. Traffic signal warrant of unsignalized study intersections.
2. On-site circulation items (truck turn templates, identify conflicts) and off-site at driveways.
3. Off-ramp queuing analysis at Cedar Av. and I-10 Freeway Ramps.
4. Sight distance analysis at Driveway 1 5. Fair share table for direct and cumulative impacts.

9. Existing Conditions

Traffic count data must be new or within one year. Provide traffic count dates if using other than new counts.

Date of counts: Per Memo

NOTE Fees are due and must be submitted with, or prior to submittal of this form. The City will not process the Scoping Agreement prior to the receipt of the processing fee.

Fees Paid: _____ Date _____

Recommended:

Scoping Agreement Submittal date 6/29/2021

Scoping Agreement Resubmittal date 8/18/2021

Charlene So — 8/18/2021

Applicant/Engineer — Date

Land Use Concurrence:

9-20-2021

Development Services Department — Date

Approved by:

David B Nelson — 9/29/2021

Public Works Department — Date

NOTE:

The Applicant/Engineer acknowledges that the Scoping Agreement is intended to assist in the preparation of any required TIA. It is preliminary in nature and the City does not have sufficient data to determine the ultimate conditions that may be imposed for the project. It does not provide nor limit the requirements imposed on the Project but is intended only to provide initial input into the parameters for review of the traffic generated by the Project and the initial areas to be considered and studied. Subsequent changes to scope of required analysis to be included in the TIA may be required by the Transportation Commission, Planning Commission, and/or the City Council upon Public Works Director/City Engineer review and approval.

URBAN CROSSROADS

urbanxroads.com

August 18, 2021

Mr. Daniel Casey
City of Rialto
335 W. Rialto Avenue
Rialto, CA 92376

SUBJECT: DURST DRIVE WAREHOUSE (APN NO. 1280-622-5, -6, -7) TRAFFIC ANALYSIS SCOPING AGREEMENT

Dear Mr. Daniel Casey:

Urban Crossroads, Inc. is pleased to submit this scoping letter to City of Rialto regarding the Traffic Analysis for the proposed Durst Drive Warehouse development (**Project**), which is located at 1230 West Durst Drive in the City of Rialto. For the purposes of the traffic study, the Project is proposed consist of a single 235,000 square foot warehouse building. This letter describes the draft proposed project trip generation, trip distribution, and analysis methodology, which have been used to establish the draft proposed project study area and analysis locations.

A preliminary site plan for the proposed Project is shown on Exhibit 1. Exhibit 2 depicts the location of the proposed Project in relation to the existing roadway network. It is anticipated that the Project would be developed in a single phase with an anticipated Opening Year of 2023. For the purpose of this analysis, the following driveways will be assumed to provide access to the Project site:

- Driveway 1 on Cedar Avenue – Right-in/Left-out access (passenger cars and trucks)
- Driveway 2 on Cedar Avenue – Right-in/Right-out access (passenger cars only)
- Driveway 3 on Durst Drive – Full access (passenger cars and trucks)

TRIP GENERATION

In order to develop the traffic characteristics of the proposed project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (9th Edition, 2012) for Warehousing (ITE Land Use Code 150) were used. The vehicle and truck mix were sourced from the City of Rialto's Public Works Department's Traffic Impact Analysis Report Guidelines and Requirements (adopted February 4, 2014). Table 1 presents the trip generation rates. Table 2 shows the resulting Project trip generation summary, which shows the Project is anticipated to generate a net total of 1,406 two-way passenger car equivalent (PCE) trips per day with 122 PCE AM peak hour trips and 130 PCE PM peak hour trips.

TABLE 1: TRIP GENERATION RATES

Land Use[1]	ITE LU Code	Units[2]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Actual Vehicles:									
Warehousing[3]	150	TSF	0.240	0.060	0.300	0.080	0.240	0.320	3.560
Passenger Cars (60.0%)			0.144	0.036	0.180	0.048	0.144	0.192	2.136
2-Axle Trucks (0.8%)			0.002	0.001	0.003	0.001	0.002	0.003	0.029
3-Axle Trucks (11.2%)			0.027	0.007	0.034	0.009	0.027	0.036	0.399
4-Axle+ Trucks (28.0%)			0.067	0.016	0.083	0.022	0.067	0.089	0.996
Passenger Car Equivalent (PCE):									
Warehousing[3]	150	TSF	0.240	0.060	0.300	0.080	0.240	0.320	3.560
Passenger Cars (60.0%)			0.144	0.036	0.180	0.048	0.144	0.192	2.136
2-Axle Trucks (0.8%) (PCE = 1.5)[4]			0.003	0.002	0.005	0.002	0.003	0.005	0.044
3-Axle Trucks (11.2%) (PCE = 2.0)[4]			0.054	0.014	0.068	0.018	0.054	0.072	0.798
4-Axle+ Trucks (28.0%) (PCE = 3.0)[4]			0.201	0.048	0.249	0.066	0.201	0.267	2.988

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Ninth Edition (2012).

[2] TSF = thousand square feet

[3] Vehicle and Truck Mix Source: City of Rialto Public Works Department Traffic Impact Analysis Report Guidelines and Requirements (2013).

[4] PCE rates are per City of Rialto Public Works Department Traffic Impact Analysis Report Guidelines and Requirements (2013).

TABLE 2: PROJECT TRIP GENERATION SUMMARY

Project Land Use	Quantity Units[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Actual Vehicles:								
Warehouse	235.000 TSF							
Passenger Cars:		34	9	43	12	34	46	502
2-axle Trucks:		1	1	2	1	1	2	8
3-axle Trucks:		7	2	9	3	7	10	94
4+-axle Trucks:		16	4	20	6	16	22	236
Total Trucks:		24	7	31	10	24	34	338
Total Net Trips (Actual Vehicles)		**58**	**16**	**74**	**22**	**58**	**80**	**840**
Passenger Car Equivalent (PCE):								
Warehouse	235.000 TSF							
Passenger Cars:		34	9	43	12	34	46	502
2-axle Trucks:		1	1	2	1	1	2	12
3-axle Trucks:		13	4	17	5	13	18	188
4+-axle Trucks:		48	12	60	16	48	64	704
Total Trucks (PCE):		62	17	79	22	62	84	904
Total Net Trips (PCE)		**96**	**26**	**122**	**34**	**96**	**130**	**1,406**

[1] TSF = thousand square feet

TRIP DISTRIBUTION

The trip distribution pattern is heavily influenced by the geographical location of the site, the location of surrounding uses, and the proximity to the regional freeway system. The Project trip distribution patterns are graphically depicted on Exhibit 3 for passenger cars and Exhibit 4 for trucks. Due to the proximity of Driveway 1 to the existing railroad tracks, this driveway will prohibit left turns in from Cedar Avenue and right turns out of Driveway 1.

ANALYSIS SCENARIOS

Consistent with the City's TIA guidelines, intersection analysis will be provided for the following analysis scenarios:

- Existing (2021) Conditions
- Existing plus Ambient Growth plus Project (EAP) (2023) Conditions
- Existing plus Ambient Growth plus Project plus Cumulative (EAPC) (2023) Conditions

All study area intersections will be analyzed using the HCM (6th Edition) methodology.

AMBIENT GROWTH

Pursuant to discussion with City staff and consistent with other studies performed in the area, an ambient growth rate of 2% per year is proposed for the study area intersection to approximate background growth not identified by nearby cumulative development projects.

STUDY AREA

The traffic impact study area was defined in conformance with the requirements of the City's traffic study guidelines, which state that the requirement to prepare a TIA will be based upon, but not limited to, one or more of the following criteria:

- In general, the study area shall include any intersection of streets on which at least one street is classified as a Collector or above, where the proposed project, along with adjacent projects, opening in the same time frame, generate more than 50 peak hour trips (truck trips adjusted to PCE) up to 5 miles from the project site.
- The study area shall include any freeway interchanges within 2 miles that is designated to take more than 40% of total traffic from the project, irrespective of the total number of trips.
- Any additional intersections of concern which include, but are not limited to, project driveways, additional intersections located in the vicinity of schools, shopping areas, or other locations of high trip generation and roadway links that exceed V/C ratio as a result of project traffic, as determined by the City of Rialto.

Exhibit 2 identifies the proposed study area intersections based on the aforementioned criteria. The Project is anticipated to contribute less than 50 PCE peak hour trips to the I-210 Freeway interchange at Ayala Avenue and is in excess of 2-miles from the site. As such, this interchange is not included in the study area.

ANALYSIS METHODOLOGY

The City of Rialto requires signalized intersection operations analysis based on the methodology described in the Highway Capacity Manual (HCM) (6th Edition). Intersection level of service (LOS) operations are based on an intersection's average control delay. Unsignalized intersections will be evaluated using the methodology described in the HCM (6th Edition). At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For all-way stop controlled intersections, LOS is computed for the intersection as a whole. The default parameters, including saturation flow rates, which will be utilized in the traffic analysis will be consistent with Exhibit C of the City of Rialto's TIA guidelines.

LEVEL OF SERVICE (LOS) CRITERIA

The City of Rialto 2010 General Plan Update has established minimum LOS standards. Specifically, General Plan Policies 4-1.20 and 4-1.21 establish the minimum standards to be applied to any TIA, as follows:

- Policy 4-1.20: Design City streets so that signalized intersections operate at Level of Service (LOS) D or better during the morning and evening peak hours and require new development to mitigate traffic impacts that degrade LOS below that level.
- Policy 4-1.21: Design City streets so that unsignalized intersections operate with no vehicular movement having an average delay greater than 120 seconds during the morning and evening peak hours and require new development to mitigate traffic impacts that increase delay above that level.

EXISTING COUNT DATA

The Rialto Unified School District began instruction on August 9, 2021, for the 2021-2022 school year and is back to in-person instruction. As such, we are proposing that new traffic counts be conducted once the scoping agreement has been approved and no further adjustments are made to establish the baseline condition. Although there are effects to local traffic related to the ongoing COVID-19 pandemic, these changes may be more long-lasting and should be reflected in the baseline condition.

FAIR SHARE CALCULATION METHODOLOGY

Improvements found to be included in a local or regional fee program will be identified as such in a table. The table shall include direct and cumulative impacts. For improvements that do not appear to be in either of the pre-existing fee programs, a fair share financial contribution based on the Project's fair share impact will be calculated in order to mitigate the Project's share of impacts. The City will collect fir share component or condition Project to build improvement as deemed appropriate. The Project's fair share cost of improvements would be determined based on the following equation, which is the ratio of Project traffic to new traffic, where new traffic is total future traffic less existing baseline traffic:

Project Fair Share % = Project Traffic / (EAPC Total Traffic – Existing Traffic)

SPECIAL ISSUES

The following special issue will also be addressed as part of the TIA:

- *Traffic Signal Warrant Analysis*: Traffic signal warrant analysis will be performed for all full-access unsignalized study area intersections utilizing the Caltrans peak-hour warrants for existing intersections, and the Caltrans daily warrant for new intersections.
- *Site Access Evaluation*: The turn pocket lengths will be determined through peak hour traffic simulations developed using Synchro and SimTraffic software in an effort to identify the required storage capacity for turn lanes at each Project driveway.
- *Sight Distance*: Conduct sight distance analysis at Driveway 1.
- *Fair Share Analysis*: Fair share table will be provided in the traffic study and will provide calculations at locations with direct and cumulative deficiencies.
- *Truck Access*: Utilize truck turn templates at the applicable driveways/turning maneuvers to verify adequate access for heavy trucks. These template exhibits will be incorporated into the traffic study.
- *VMT*: Consistent with SB743, a vehicle-miles-traveled (VMT) assessment will be prepared for the proposed Project under separate cover in order to identify any traffic impacts and mitigation measures and will be used to support the California Environmental Quality Act (CEQA) environmental document.

CUMULATIVE DEVELOPMENT PROJECTS

A map of cumulative development projects can be found on Exhibit 5, with the list of projects on Table 3. Consistent with City guidance, the warehouse trip generation rate will be utilized for any high-cube warehouse/distribution center project within the City of Rialto as the City does not recognize the use of the high-cube warehouse/distribution center ITE trip generation rates/SCAQMD vehicle mix recommended for use by the SCAQMD. It is requested that the City provide any additional cumulative projects.

SIGNAL TIMING

It is our understanding that signal timing for Cedar Avenue is currently coordinated through SBCTA. The signal timing for the Cedar Avenue corridor, as currently maintained by SBCTA, will be utilized for all analysis scenarios for the purposes of the traffic study (without signal optimization). Any signal timing changes will be identified as improvements, if applicable.

If you have any questions, please contact me directly at (949) 861-0177.

Respectfully submitted,

URBAN CROSSROADS, INC.

Charlene So

Charlene So, PE
Associate Principal

TABLE 3: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

ID	Project Name	Land Use	Quantity	Units[1]
City of Rialto:				
RIA1	South of Santa Ana Av., East of Riverside Av.	Warehouse	370.000	TSF
RIA2	SEC of Riverside Av. and Industrial Dr.	Trucking	3.580	AC
RIA3	NWC of Riverside Av. and Industrial Dr.	Truck Drop	3.360	AC
RIA4	SEC of Riverside Av. and Santa Ana Av.	Super Convenience Market/Gas Station	16	VFP
		Diesel Station	2	VFP
RIA5	SWC of Riverside Av. & Slover Av.	Fast Food w/ Drive-Thru	5.200	TSF
RIA6	Flyers Energy Addition	Warehouse	9.350	TSF
RIA7	Valley/Willow Warehouse	Warehousing	492.410	TSF
RIA8	Old Dominion Expansion	Parking Lot (407 spaces)	17.780	AC
RIA9	SC Fuels	Fuel Storage/Service	54.460	TSF
RIA10	Lynn Trucking	Truck Parking Yard	3.070	AC
		Car Wash/Repair	8.827	TSF
RIA11	Riverside Pallet Yard	Pallet Yard	3.580	AC
RIA12	Onyx Paving	Contractor's Yard	0.770	AC
RIA13	Angelus Black - Concrete Block	Manufacturing	178.475	TSF
RIA14	Bakery Addition	Bakery	14.000	TSF
RIA15	Lilac Avenue Warehouse	Truck Terminal	47.609	TSF
RIA16	Cedar Villas	Single Family Residential	22	DU
County of San Bernardino:				
SB1	NWC of Slover Av. and Locust Av.	Fast Food Restaurant With Drive-Thru	3.265	TSF
		Retail Store	7.200	TSF
		Warehouse	20.750	TSF
SB2	SEC of Linden Av. and Valley Bl.	Fast Food Restaurant	1.500	TSF
SB3	Valley Bl., West of Linden Av.	Office Building	0.250	AC
SB4	Linden Av., north of Slover Av.	Tire Store	3.000	TSF
SB5	Slover Av. between Locust Av. and Laurel Av.	High-Cube Warehouse	344.000	TSF
SB6	Locust Av. and 7th St.	Single Family Residential	198	DU
SB7	NEC and NWC of Cedar Av. and Orange St.	Warehouse	395.000	TSF
SB8	NWC of Cedar Av. and Jurupa Av.	High-Cube Warehouse	677.000	TSF
SB9	Cedar Truck Yard	Truck Storage	8.940	AC
SB10	Cedar / Slover Retail	Super Convenience Market/Gas Station	12	VFP
		Automated Car Wash	1.000	Tunnel
		Fast Food Restaurant With Drive-Thru	9.907	TSF
SB11	Cedar Avenue Technology Center	Warehouse	184.770	TSF
SB12	Cactus and Slover Warehouse	Warehouse	257.855	TSF
City of Fontana:				
F1	West Valley Logistics Center	High-Cube Transload & Short-Term Storage	3183.100	TSF
		Warehouse	290.590	TSF

[1] DU = Dwelling Units; TSF = Thousand Square Feet; AC = Acres; VFP = Vehicle Fueling Positions

EXHIBIT 1: PRELIMINARY SITE PLAN

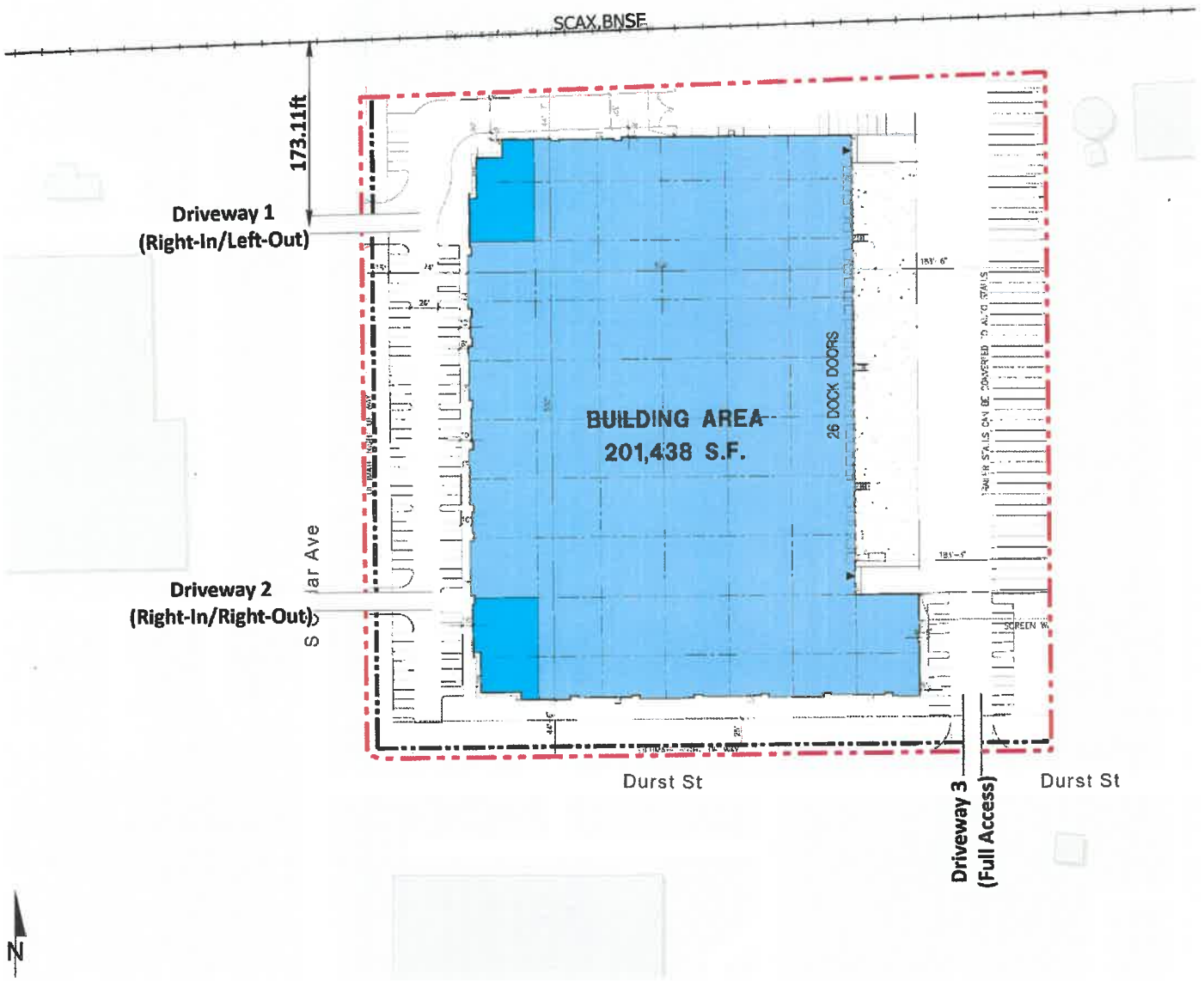


EXHIBIT 2: STUDY AREA

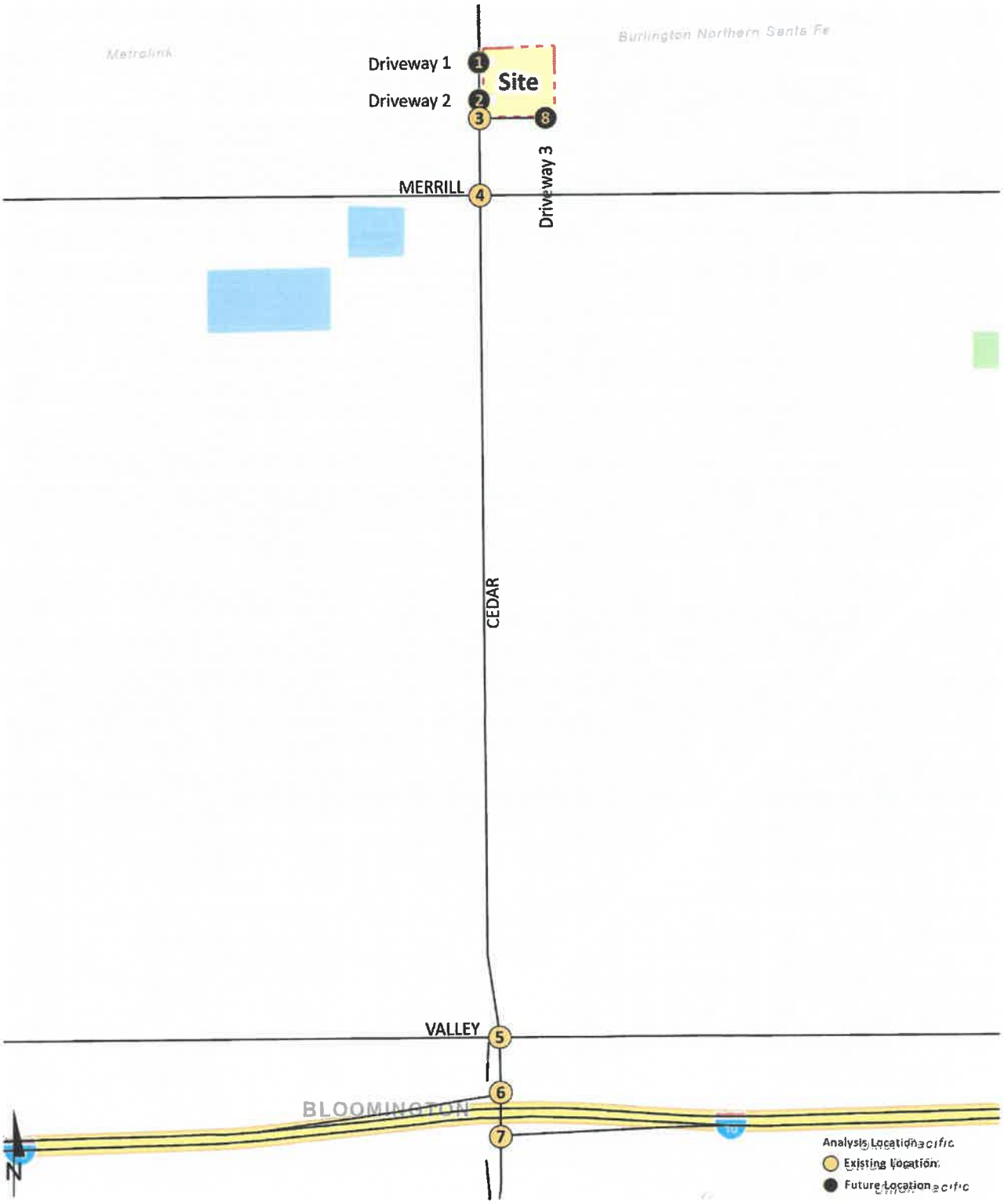


EXHIBIT 3: PROJECT (PASSENGER CAR) TRIP DISTRIBUTION

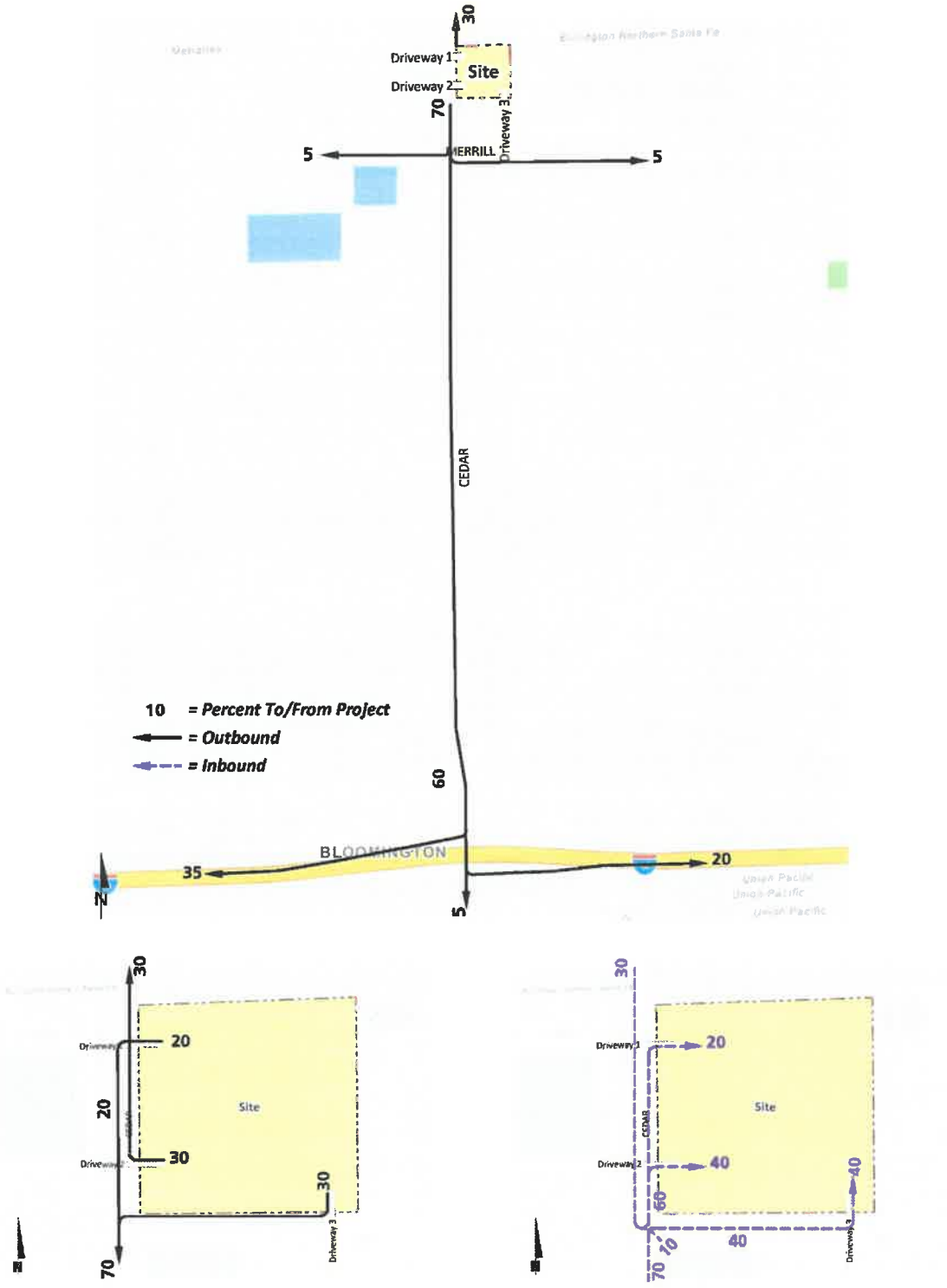


EXHIBIT 4: PROJECT (TRUCK) TRIP DISTRIBUTION

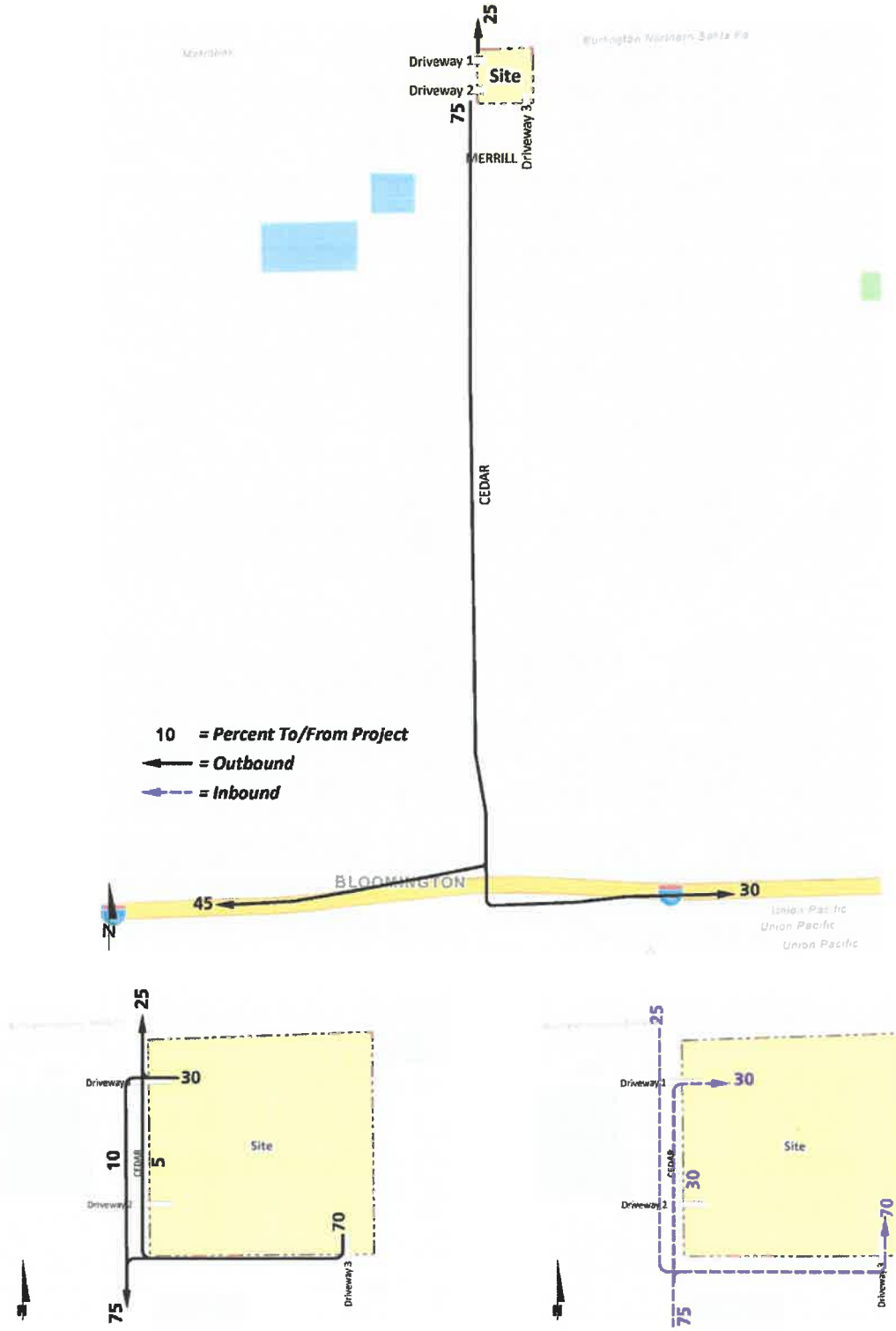
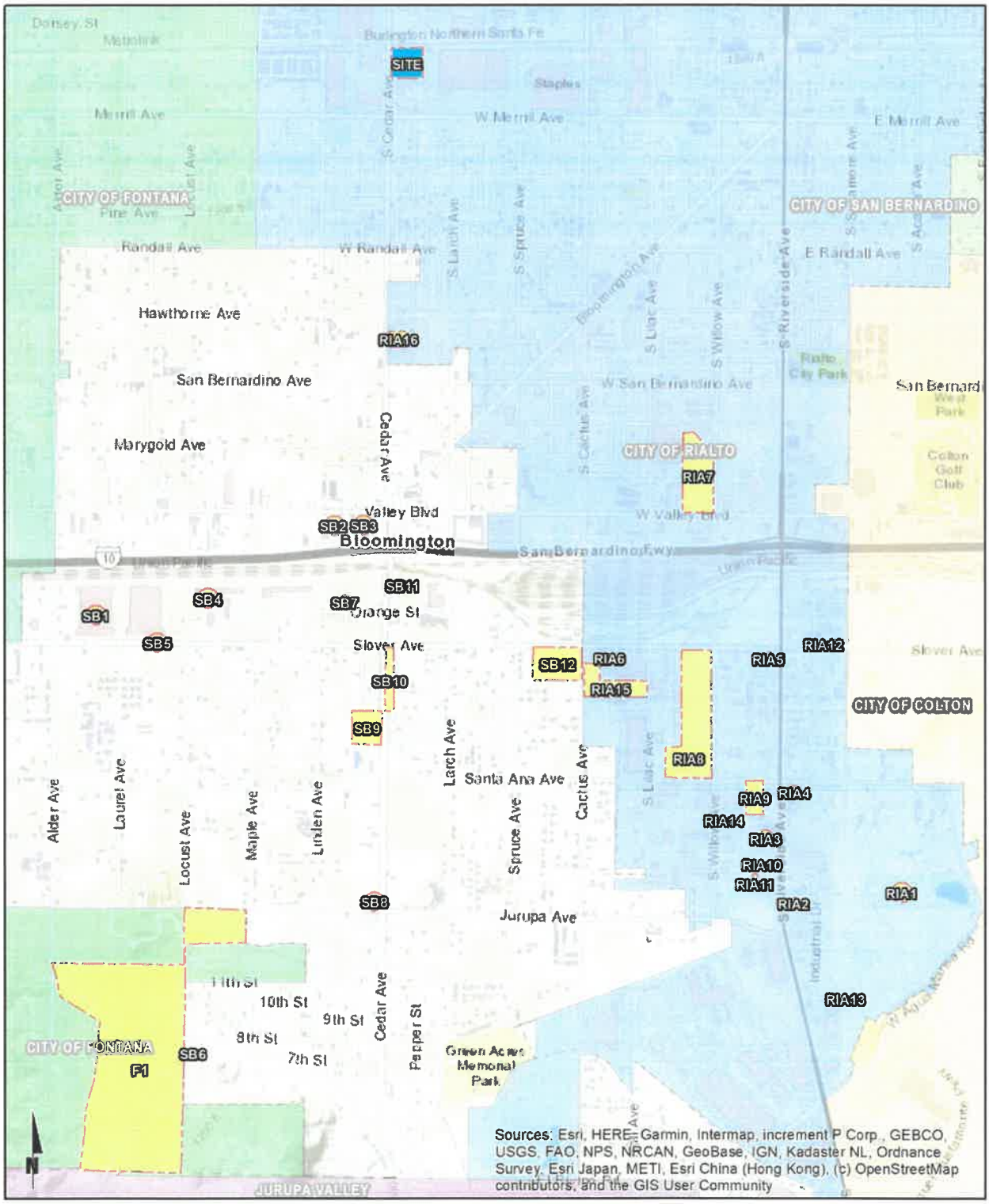


EXHIBIT 5: CUMULATIVE DEVELOPMENT LOCATION MAP



APPENDIX 1.2:

VEHICLE MILES TRAVELED (VMT) ANALYSIS

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URBAN CROSSROADS

urbanxroads.com

November 3, 2021

Mr. Peter Schafer
Black Creek Group
4675 MacArthur Court, Suite 625
Newport Beach, California 92660

SUBJECT: AIREF RIALTO COMMERCE CENTER LP (APN NO. 1280-622-5, -6, -7) VEHICLE MILES TRAVELED (VMT) ANALYSIS

Dear Mr. Peter Schafer:

The following VMT Analysis has been prepared for the proposed AIREF Rialto Commerce Center LP (**Project**), which is located at 1230 West Durst Drive in the City of Rialto.

PROJECT OVERVIEW

It is our understanding that the project is to consist of a single 203,351 square foot (sf) industrial warehouse building. (See Attachment A)

BACKGROUND

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which requires all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the new measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020. To aid in the transition from LOS to VMT, the Governor's Office of Planning and Research (OPR) published its Technical Advisory on Evaluating Transportation Impacts in CEQA (**Technical Advisory**). (1) Based on OPR's Technical Advisory, the County of San Bernardino has recently adopted their San Bernardino County Transportation Impact Study Guidelines (July 2019) (**County Guidelines**) (2). It is our understanding that the City of Rialto is currently in development of VMT analysis guidelines and impact thresholds, therefore, County Guidelines are to be utilized until such time the City formally adopts their own.

PROJECT SCREENING

The County Guidelines provides details on appropriate "screening thresholds" that can be used to identify when a proposed land use project is anticipated to result in a less-than-significant impact without conducting a more detailed analysis. Screening thresholds are broken into the following three types:

- Project Type Screening
- Transit Priority Area (TPA) Screening

- Low VMT Area Screening

A land use project need only to meet one of the above screening thresholds to result in a less than significant impact.

PROJECT TYPE SCREENING CRITERIA

Consistent with County Guidelines and the Technical Advisory, local serving uses such as day care centers, retail uses under 50,000 sf, community institutions, affordable housing, and projects that generate fewer than 110 daily vehicle trips. Trips generated by the Project's proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition, 2012. (3) The proposed Project is anticipated to generate a total of 840 vehicle trip-ends per day, exceeding the 110 daily vehicle trips threshold. (See Attachment B)

Project Type screening criteria is not met.

TPA SCREENING

Consistent with guidance identified in the Technical Advisory, County Guidelines note that projects located within a Transit Priority Area (TPA) (i.e., within ½ mile of an existing "major transit stop"[1] or an existing stop along a "high-quality transit corridor"[2]) may be presumed to have a less than significant impact absent substantial evidence to the contrary. The presumption may not be appropriate if a project:

- Has a Floor Area Ratio (FAR) of less than 0.75;
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

The Project site is not located within ½ mile of an existing major transit stop, or along a high-quality transit corridor. (See Attachment C)

TPA screening threshold is not met.

[1] Pub. Resources Code, § 21064.3 ("'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.").
[2] Pub. Resources Code, § 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").

LOW VMT AREA SCREENING

As noted in the County Guidelines, "Projects located within a low VMT generating area as determined by the analyst (e.g., development in efficient areas of the County will reduce VMT per person/employee and is beneficial to the region."[3] The Screening Tool uses the sub-regional San Bernardino Transportation Analysis Model (SBTAM) to measure VMT performance within individual traffic analysis zones (TAZ's) within the region. The Project's physical location, based on parcel location, is input into the Screening Tool to determine project generated VMT. The Project was found to reside in TAZ 53748701. A review of the socio-economic data contained within TAZ 53748401 was found to include employment consistent with the proposed Project. County guidelines state that employment projects are to utilize VMT per employee for all home-based-work trips (attractions).[4] The County Guidelines continues "A project should be considered to have a significant impact if the project VMT per employee is greater than 4% below the existing VMT per employee for the County".[5] The Project is replacing an existing industrial use. Examining further, the existing socio-economic data contained within SBTAM shows employment types consistent with the Project's proposed land use. Based on screening tool results the Project was found to be located within a low VMT area. (See Attachment C)

Low VMT Area screening criteria is met.

CONCLUSION

The Project was found to meet the Low VMT area screening criteria. The project is consistent with City of Rialto's General Plan and as stated in the County Guidelines "Cumulative impacts should be evaluated for consistency with the adopted RTP/SCS. For example, if a project is included in the RTP/SCS, the project's cumulative impacts shall be less-than significant." As previously mentioned, the Project resides in an already low VMT area and is not anticipated to increase congestion along major corridors. The Project's VMT impact is therefore anticipated to be less than significant. Further VMT analysis is not required based on the current San Bernardino County guidance. As the City of Rialto is currently developing agency specific VMT guidelines and thresholds. These findings may be subject to change once the City adopts its own VMT methodology and thresholds.

[3] County Guidelines; Page 19
[4] County Guidelines; Page 19
[5] County Guidelines; Page 21

If you have any questions, please contact me directly at 949-660-1994.

Respectfully submitted,

URBAN CROSSROADS, INC.



Alex So
Senior Analyst

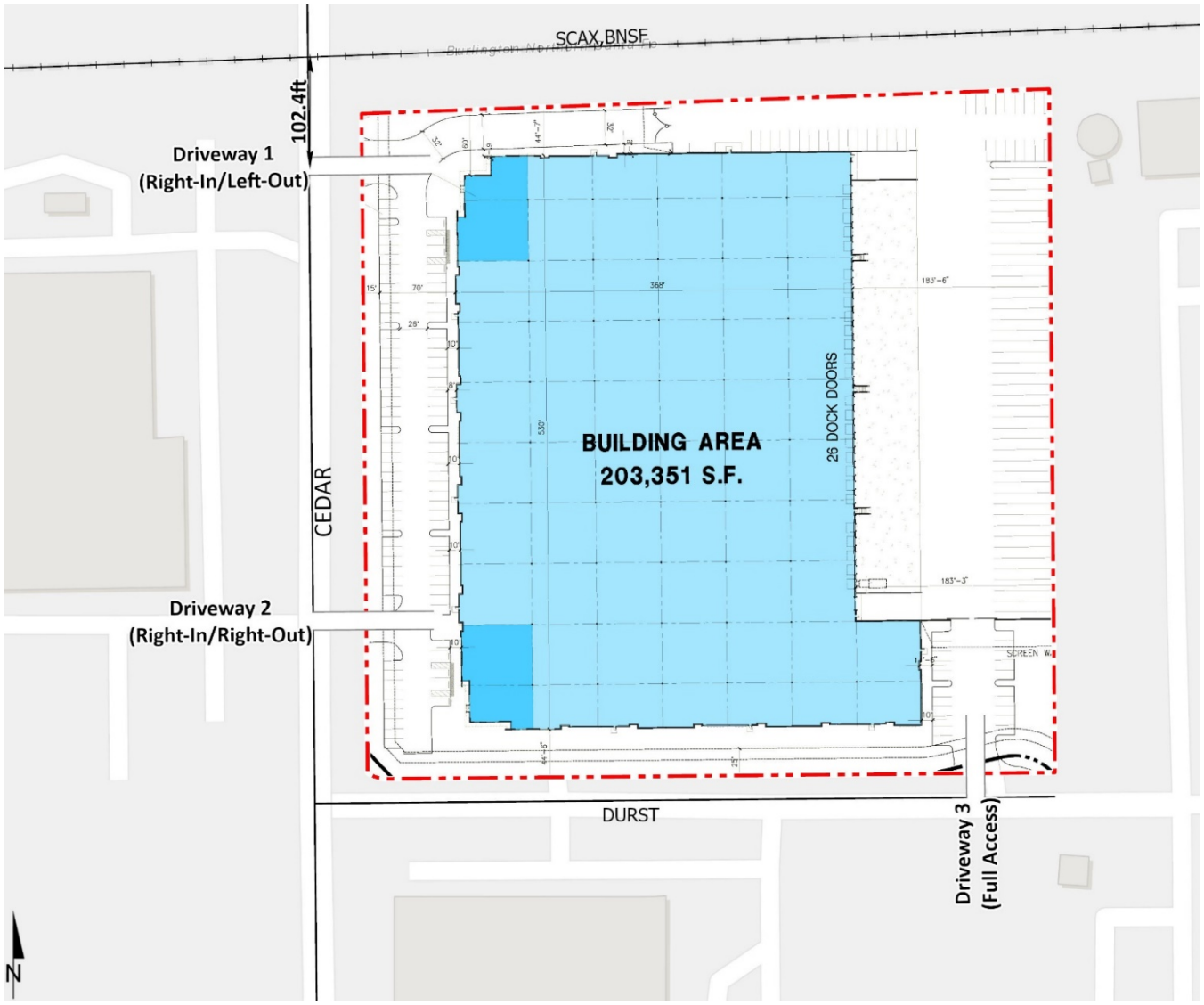
REFERENCES

1. **Office of Planning and Research.** *Technical Advisory on Evaluating Transportation Impacts in CEQA.* State of California : s.n., December 2018.

2. **San Bernardino County.** *Transportation Impact Study Guidelines.* July 2019.

3. **Institute of Transportation Engineers.** *Trip Generation Manual.* 9th Edition. 2012.

ATTACHMENT A
PRELIMINARY SITE PLAN


SCAX,BNSF
102.4ft
Driveway 1
(Right-In/Left-Out)
CEDAR
BUILDING AREA
203,351 S.F.
26 DOCK DOORS
Driveway 2
(Right-In/Right-Out)
DURST
Driveway 3
(Full Access)
N

ATTACHMENT B:
PROJECT TRIP GENERATION

TABLE 1: PROJECT TRIP GENERATION SUMMARY

Land Use[1]	ITE LU Code	Units[2]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Actual Vehicles:									
Warehousing[3]	150	TSF	0.240	0.060	0.300	0.080	0.240	0.320	3.560
Passenger Cars (60.0%)			0.144	0.036	0.180	0.048	0.144	0.192	2.136
2-Axle Trucks (0.8%)			0.002	0.001	0.003	0.001	0.002	0.003	0.029
3-Axle Trucks (11.2%)			0.027	0.007	0.034	0.009	0.027	0.036	0.399
4-Axle+ Trucks (28.0%)			0.067	0.016	0.083	0.022	0.067	0.089	0.996

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Ninth Edition (2012).

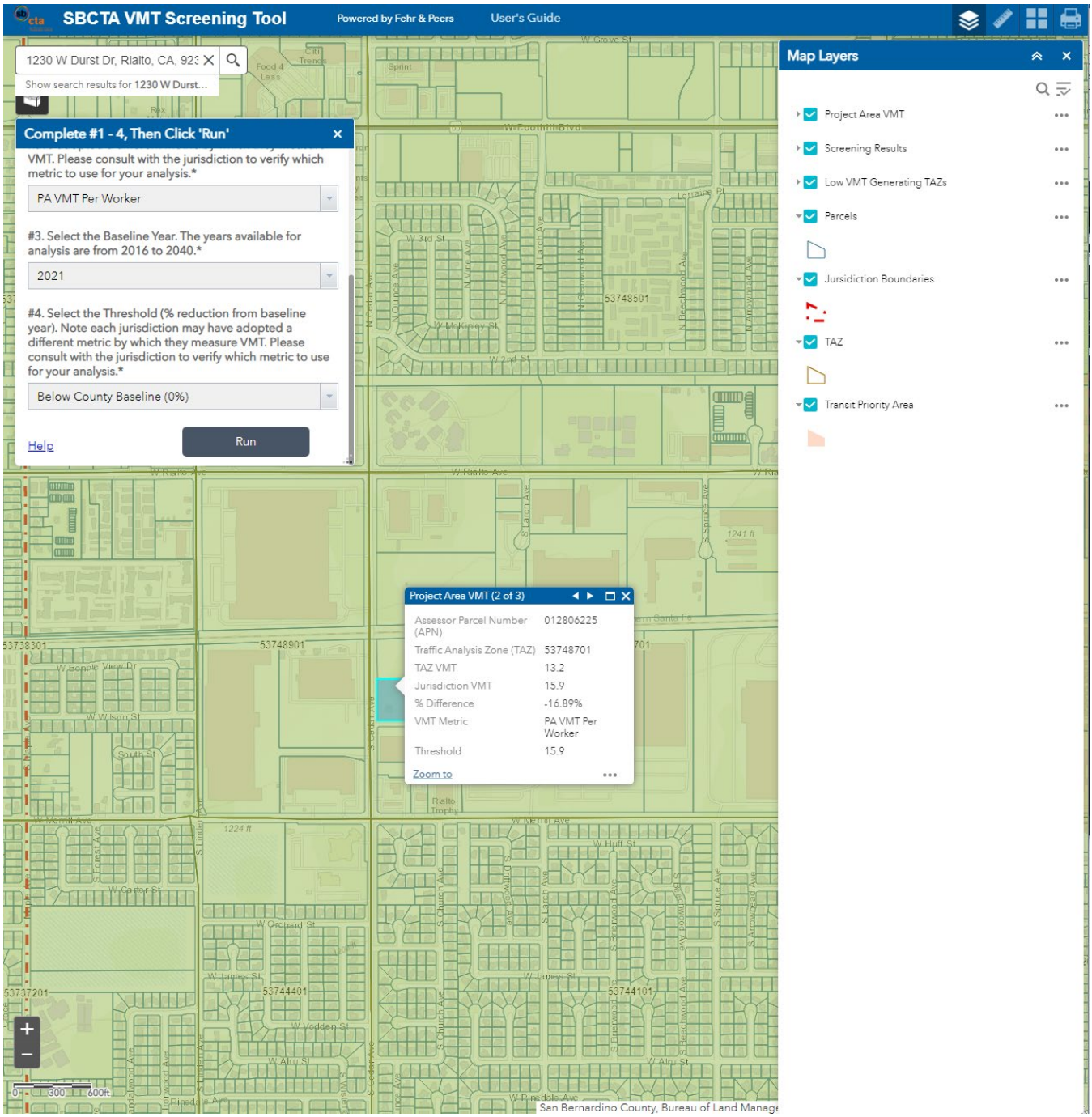
[2] TSF = thousand square feet

[3] Vehicle and Truck Mix Source: City of Rialto Public Works Department Traffic Impact Analysis Report Guidelines and Requirements (2013).

Project Land Use	Quantity	Units[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Actual Vehicles:									
Warehouse	235.000	TSF							
Passenger Cars:			34	9	43	12	34	46	502
2-axle Trucks:			1	1	2	1	1	2	8
3-axle Trucks:			7	2	9	3	7	10	94
4+-axle Trucks:			16	4	20	6	16	22	236
Total Trucks:			24	7	31	10	24	34	338
Total Net Trips (Actual Vehicles)			**58**	**16**	**74**	**22**	**58**	**80**	**840**

[1] TSF = thousand square feet

ATTACHMENT C
SBCTA SCREENING TOOL


SBCTA VMT Screening Tool
Powered by Fehr & Peers
User's Guide
1230 W Durst Dr, Rialto, CA, 923
Show search results for 1230 W Durst...
Complete #1 - 4, Then Click 'Run'
VMT. Please consult with the jurisdiction to verify which metric to use for your analysis.*
PA VMT Per Worker
#3. Select the Baseline Year. The years available for analysis are from 2016 to 2040.*
2021
#4. Select the Threshold (% reduction from baseline year). Note each jurisdiction may have adopted a different metric by which they measure VMT. Please consult with the jurisdiction to verify which metric to use for your analysis.*
Below County Baseline (0%)
Help
Run
Map Layers
Project Area VMT
Screening Results
Low VMT Generating TAZs
Parcels
Jurisdiction Boundaries
TAZ
Transit Priority Area
Project Area VMT (2 of 3)
Assessor Parcel Number (APN) 012806225
Traffic Analysis Zone (TAZ) 53748701
TAZ VMT 13.2
Jurisdiction VMT 15.9
% Difference -16.89%
VMT Metric PA VMT Per Worker
Threshold 15.9
Zoom to
53748501
53748901
53738301
53737201
53744401
53744101
San Bernardino County, Bureau of Land Manage

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APPENDIX 1.3:

SITE ADJACENT QUEUES

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Intersection: 1: Cedar Av. & Driveway 1

Movement	WB
Directions Served	L
Maximum Queue (ft)	35
Average Queue (ft)	5
95th Queue (ft)	23
Link Distance (ft)	138
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Cedar Av. & Driveway 2

Movement	WB	SB
Directions Served	R	T
Maximum Queue (ft)	24	6
Average Queue (ft)	2	0
95th Queue (ft)	15	4
Link Distance (ft)	153	145
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Cedar Av. & Durst Dr

Movement	WB	NB	NB	SB	SB	SB
Directions Served	LR	T	TR	L	T	T
Maximum Queue (ft)	53	147	176	76	153	159
Average Queue (ft)	20	45	58	25	57	51
95th Queue (ft)	47	121	148	59	127	122
Link Distance (ft)	481	686	686		170	170
Upstream Blk Time (%)					0	0
Queuing Penalty (veh)					0	0
Storage Bay Dist (ft)				50		
Storage Blk Time (%)				3	7	
Queuing Penalty (veh)				19	3	

Intersection: 8: Durst Dr & Driveway 3

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	19	35
Average Queue (ft)	1	14
95th Queue (ft)	8	39
Link Distance (ft)	481	169
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 23

Intersection: 1: Cedar Av. & Driveway 1

Movement	WB
Directions Served	L
Maximum Queue (ft)	43
Average Queue (ft)	11
95th Queue (ft)	36
Link Distance (ft)	138
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Cedar Av. & Driveway 2

Movement	WB	SB
Directions Served	R	T
Maximum Queue (ft)	31	6
Average Queue (ft)	9	0
95th Queue (ft)	31	4
Link Distance (ft)	153	145
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Cedar Av. & Durst Dr

Movement	WB	NB	NB	SB	SB	SB
Directions Served	LR	T	TR	L	T	T
Maximum Queue (ft)	99	212	207	54	133	133
Average Queue (ft)	54	88	98	13	73	65
95th Queue (ft)	88	177	188	41	118	115
Link Distance (ft)	481	686	686		170	170
Upstream Blk Time (%)						0
Queuing Penalty (veh)						0
Storage Bay Dist (ft)				50		
Storage Blk Time (%)				1	11	
Queuing Penalty (veh)				4	2	

Intersection: 8: Durst Dr & Driveway 3

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	25	50
Average Queue (ft)	2	29
95th Queue (ft)	16	46
Link Distance (ft)	481	169
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 6

APPENDIX 3.1:

EXISTING TRAFFIC COUNTS

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Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Rialto
N/S: Cedar Avenue
E/W: Durst Drive
Weather: Clear

File Name : 03_RLT_CE_Durst AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

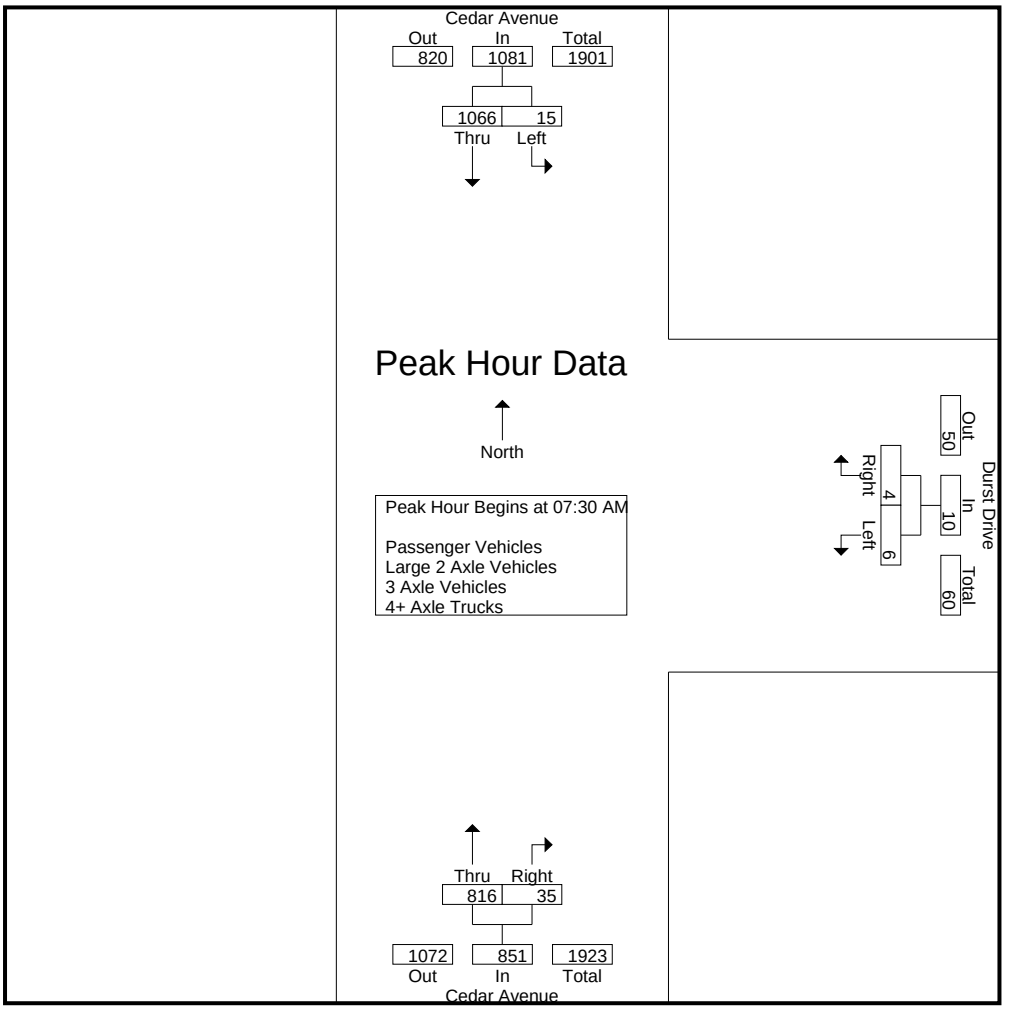
	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	7	218	225	4	3	7	228	9	237	469
07:15 AM	2	210	212	4	1	5	200	4	204	421
07:30 AM	2	238	240	1	0	1	194	7	201	442
07:45 AM	8	265	273	4	3	7	246	9	255	535
Total	19	931	950	13	7	20	868	29	897	1867
08:00 AM	5	302	307	1	0	1	211	10	221	529
08:15 AM	0	261	261	0	1	1	165	9	174	436
08:30 AM	1	205	206	2	0	2	152	6	158	366
08:45 AM	2	187	189	3	1	4	181	4	185	378
Total	8	955	963	6	2	8	709	29	738	1709
Grand Total	27	1886	1913	19	9	28	1577	58	1635	3576
Apprch %	1.4	98.6		67.9	32.1		96.5	3.5		
Total %	0.8	52.7	53.5	0.5	0.3	0.8	44.1	1.6	45.7	
Passenger Vehicles	22	1771	1793	7	8	15	1463	42	1505	3313
% Passenger Vehicles	81.5	93.9	93.7	36.8	88.9	53.6	92.8	72.4	92	92.6
Large 2 Axle Vehicles	0	49	49	2	1	3	64	1	65	117
% Large 2 Axle Vehicles	0	2.6	2.6	10.5	11.1	10.7	4.1	1.7	4	3.3
3 Axle Vehicles	1	23	24	1	0	1	16	1	17	42
% 3 Axle Vehicles	3.7	1.2	1.3	5.3	0	3.6	1	1.7	1	1.2
4+ Axle Trucks	4	43	47	9	0	9	34	14	48	104
% 4+ Axle Trucks	14.8	2.3	2.5	47.4	0	32.1	2.2	24.1	2.9	2.9

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	2	238	240	1	0	1	194	7	201	442
07:45 AM	**8**	265	273	**4**	**3**	**7**	**246**	9	**255**	**535**
08:00 AM	5	**302**	**307**	1	0	1	211	**10**	221	529
08:15 AM	0	261	261	0	1	1	165	9	174	436
Total Volume	15	1066	1081	6	4	10	816	35	851	1942
% App. Total	1.4	98.6		60	40		95.9	4.1		
PHF	.469	.882	.880	.375	.333	.357	.829	.875	.834	.907

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Rialto
N/S: Cedar Avenue
E/W: Durst Drive
Weather: Clear

File Name : 03_RLT_CE_Durst AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:00 AM			07:00 AM		
+0 mins.	2	238	240	**4**	**3**	**7**	228	**9**	237
+15 mins.	**8**	265	273	4	1	5	200	4	204
+30 mins.	5	**302**	**307**	1	0	1	194	7	201
+45 mins.	0	261	261	4	3	7	**246**	9	**255**
Total Volume	15	1066	1081	13	7	20	868	29	897
% App. Total	1.4	98.6		65	35		96.8	3.2	
PHF	.469	.882	.880	.813	.583	.714	.882	.806	.879

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Rialto
N/S: Cedar Avenue
E/W: Durst Drive
Weather: Clear

File Name : 03_RLT_CE_Durst AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Passenger Vehicles

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	7	211	218	1	3	4	212	8	220	442
07:15 AM	2	195	197	1	1	2	181	3	184	383
07:30 AM	2	226	228	0	0	0	177	5	182	410
07:45 AM	5	255	260	3	3	6	239	8	247	513
Total	16	887	903	5	7	12	809	24	833	1748
08:00 AM	5	288	293	0	0	0	197	6	203	496
08:15 AM	0	244	244	0	0	0	153	5	158	402
08:30 AM	1	179	180	1	0	1	139	4	143	324
08:45 AM	0	173	173	1	1	2	165	3	168	343
Total	6	884	890	2	1	3	654	18	672	1565
Grand Total	22	1771	1793	7	8	15	1463	42	1505	3313
Apprch %	1.2	98.8		46.7	53.3		97.2	2.8		
Total %	0.7	53.5	54.1	0.2	0.2	0.5	44.2	1.3	45.4	

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	2	226	228	0	0	0	177	5	182	410
07:45 AM	**5**	255	260	**3**	**3**	**6**	**239**	**8**	**247**	**513**
08:00 AM	5	**288**	**293**	0	0	0	197	6	203	496
08:15 AM	0	244	244	0	0	0	153	5	158	402
Total Volume	12	1013	1025	3	3	6	766	24	790	1821
% App. Total	1.2	98.8		50	50		97	3		
PHF	.600	.879	.875	.250	.250	.250	.801	.750	.800	.887

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Weather: Clear

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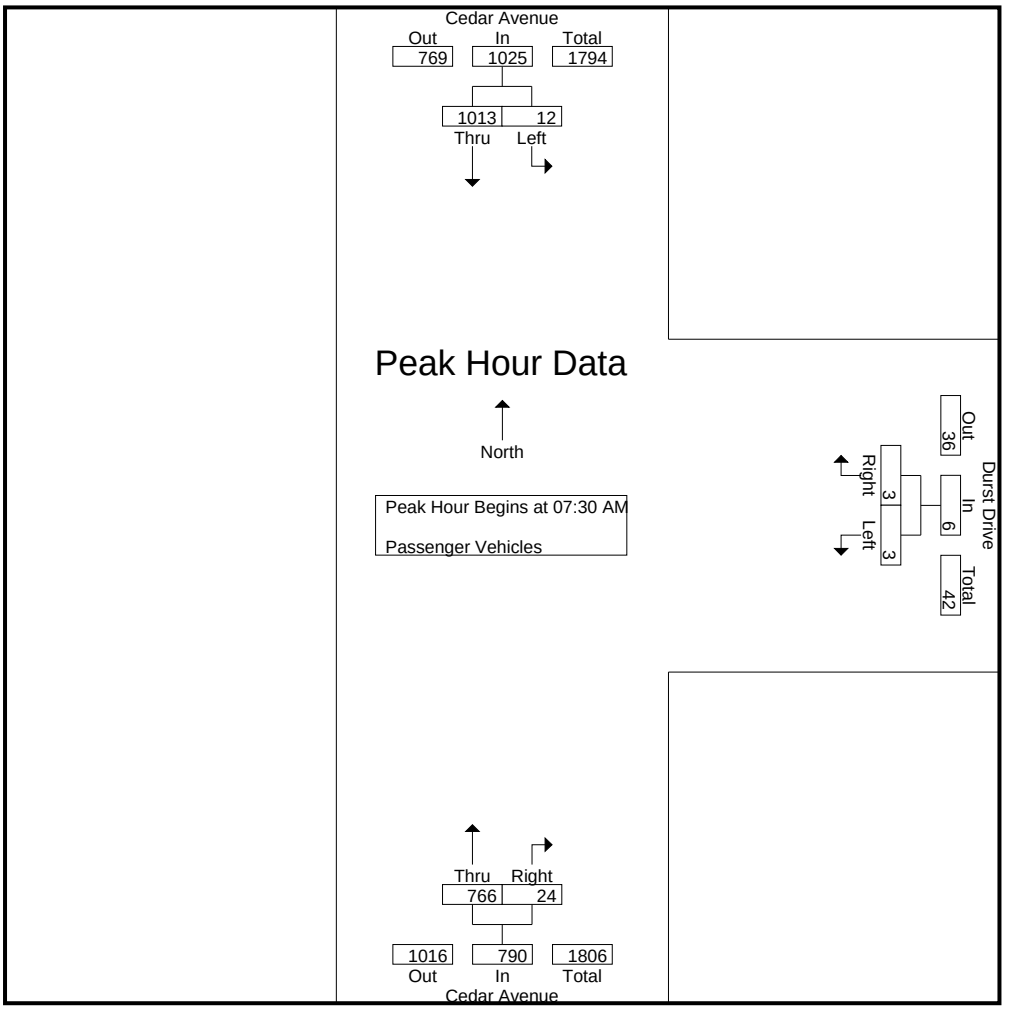

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	2	226	228	0	0	0	177	5	182
+15 mins.	**5**	255	260	**3**	**3**	**6**	**239**	**8**	**247**
+30 mins.	5	**288**	**293**	0	0	0	197	6	203
+45 mins.	0	244	244	0	0	0	153	5	158
Total Volume	12	1013	1025	3	3	6	766	24	790
% App. Total	1.2	98.8		50	50		97	3	
PHF	.600	.879	.875	.250	.250	.250	.801	.750	.800

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Groups Printed- Large 2 Axle Vehicles

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	4	4	1	0	1	10	0	10	15
07:15 AM	0	5	5	0	0	0	10	0	10	15
07:30 AM	0	5	5	0	0	0	8	0	8	13
07:45 AM	0	4	4	0	0	0	7	1	8	12
Total	0	18	18	1	0	1	35	1	36	55
08:00 AM	0	8	8	1	0	1	9	0	9	18
08:15 AM	0	5	5	0	1	1	6	0	6	12
08:30 AM	0	13	13	0	0	0	5	0	5	18
08:45 AM	0	5	5	0	0	0	9	0	9	14
Total	0	31	31	1	1	2	29	0	29	62
Grand Total	0	49	49	2	1	3	64	1	65	117
Apprch %	0	100		66.7	33.3		98.5	1.5		
Total %	0	41.9	41.9	1.7	0.9	2.6	54.7	0.9	55.6	

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	5	5	0	0	0	8	0	8	13
07:45 AM	0	4	4	0	0	0	7	**1**	8	12
08:00 AM	0	**8**	**8**	**1**	0	**1**	**9**	0	**9**	**18**
08:15 AM	0	5	5	0	**1**	1	6	0	6	12
Total Volume	0	22	22	1	1	2	30	1	31	55
% App. Total	0	100		50	50		96.8	3.2		
PHF	.000	.688	.688	.250	.250	.500	.833	.250	.861	.764

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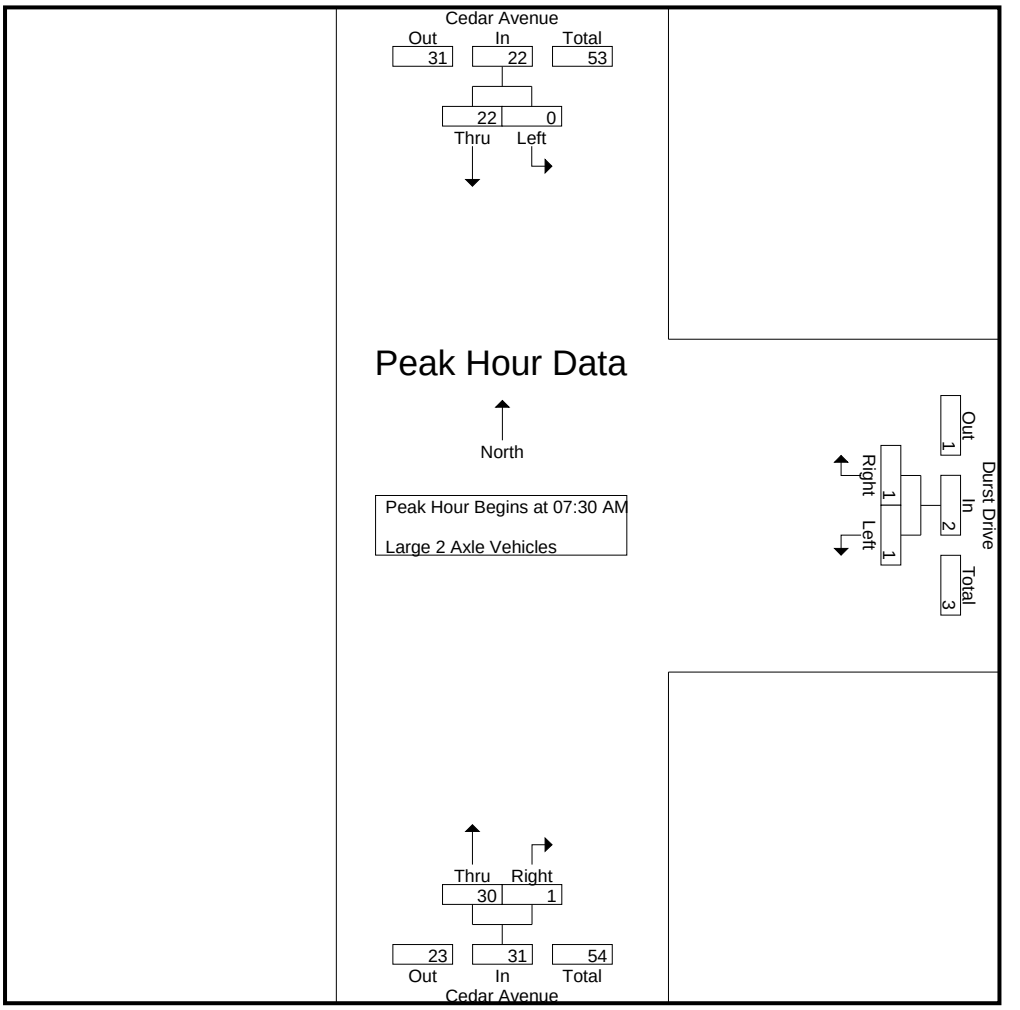

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	5	5	0	0	0	8	0	8
+15 mins.	0	4	4	0	0	0	7	**1**	8
+30 mins.	0	**8**	**8**	**1**	0	**1**	**9**	0	**9**
+45 mins.	0	5	5	0	**1**	1	6	0	6
Total Volume	0	22	22	1	1	2	30	1	31
% App. Total	0	100		50	50		96.8	3.2	
PHF	.000	.688	.688	.250	.250	.500	.833	.250	.861

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Groups Printed- 3 Axle Vehicles

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	2	1	0	1	2	0	2	5
07:15 AM	0	3	3	0	0	0	4	0	4	7
07:30 AM	0	3	3	0	0	0	4	0	4	7
07:45 AM	0	2	2	0	0	0	0	0	0	2
Total	0	10	10	1	0	1	10	0	10	21
08:00 AM	0	4	4	0	0	0	0	0	0	4
08:15 AM	0	2	2	0	0	0	1	1	2	4
08:30 AM	0	5	5	0	0	0	3	0	3	8
08:45 AM	1	2	3	0	0	0	2	0	2	5
Total	1	13	14	0	0	0	6	1	7	21
Grand Total	1	23	24	1	0	1	16	1	17	42
Apprch %	4.2	95.8		100	0		94.1	5.9		
Total %	2.4	54.8	57.1	2.4	0	2.4	38.1	2.4	40.5	

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	3	3	0	0	0	**4**	0	**4**	**7**
07:45 AM	0	2	2	0	0	0	0	0	0	2
08:00 AM	0	**4**	**4**	0	0	0	0	0	0	4
08:15 AM	0	2	2	0	0	0	1	**1**	2	4
Total Volume	0	11	11	0	0	0	5	1	6	17
% App. Total	0	100		0	0		83.3	16.7		
PHF	.000	.688	.688	.000	.000	.000	.313	.250	.375	.607

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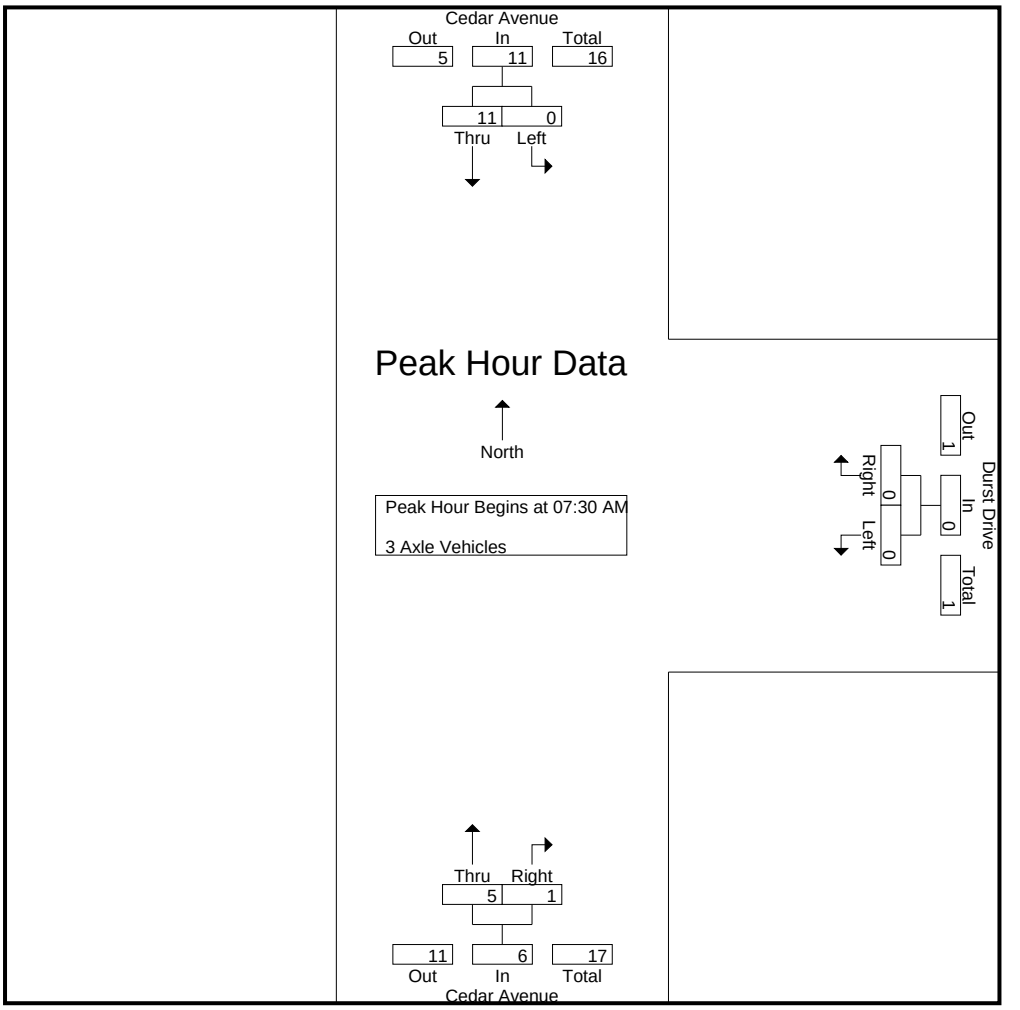

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	3	3	0	0	0	**4**	0	**4**
+15 mins.	0	2	2	0	0	0	0	0	0
+30 mins.	0	**4**	**4**	0	0	0	0	0	0
+45 mins.	0	2	2	0	0	0	1	**1**	2
Total Volume	0	11	11	0	0	0	5	1	6
% App. Total	0	100		0	0		83.3	16.7	
PHF	.000	.688	.688	.000	.000	.000	.313	.250	.375

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Groups Printed- 4+ Axle Trucks

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	1	1	0	1	4	1	5	7
07:15 AM	0	7	7	3	0	3	5	1	6	16
07:30 AM	0	4	4	1	0	1	5	2	7	12
07:45 AM	3	4	7	1	0	1	0	0	0	8
Total	3	16	19	6	0	6	14	4	18	43
08:00 AM	0	2	2	0	0	0	5	4	9	11
08:15 AM	0	10	10	0	0	0	5	3	8	18
08:30 AM	0	8	8	1	0	1	5	2	7	16
08:45 AM	1	7	8	2	0	2	5	1	6	16
Total	1	27	28	3	0	3	20	10	30	61
Grand Total	4	43	47	9	0	9	34	14	48	104
Apprch %	8.5	91.5		100	0		70.8	29.2		
Total %	3.8	41.3	45.2	8.7	0	8.7	32.7	13.5	46.2	

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	4	4	**1**	0	**1**	**5**	2	7	12
07:45 AM	**3**	4	7	1	0	1	0	0	0	8
08:00 AM	0	2	2	0	0	0	5	**4**	**9**	11
08:15 AM	0	**10**	**10**	0	0	0	5	3	8	**18**
Total Volume	3	20	23	2	0	2	15	9	24	49
% App. Total	13	87		100	0		62.5	37.5		
PHF	.250	.500	.575	.500	.000	.500	.750	.563	.667	.681

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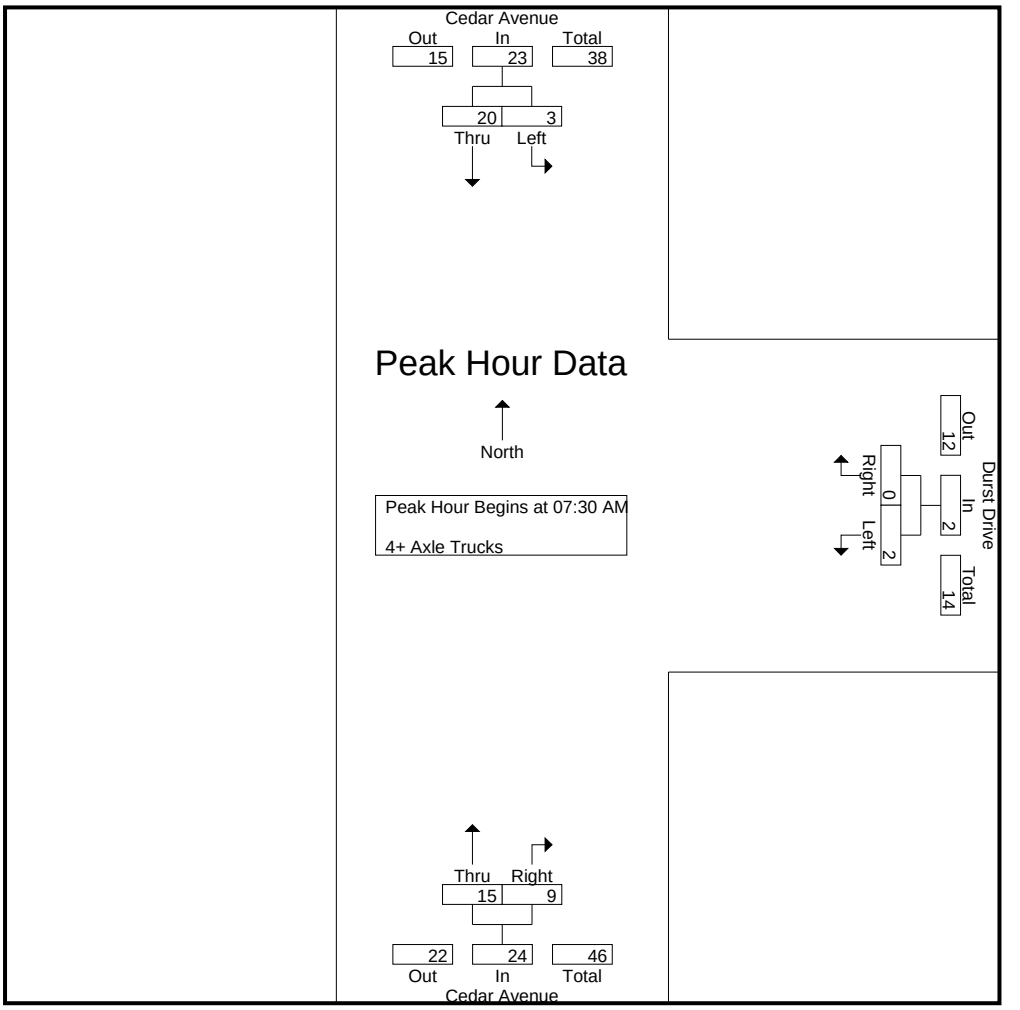

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	4	4	**1**	0	**1**	**5**	2	7
+15 mins.	**3**	4	7	1	0	1	0	0	0
+30 mins.	0	2	2	0	0	0	5	**4**	**9**
+45 mins.	0	**10**	**10**	0	0	0	5	3	8
Total Volume	3	20	23	2	0	2	15	9	24
% App. Total	13	87		100	0		62.5	37.5	
PHF	.250	.500	.575	.500	.000	.500	.750	.563	.667

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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	246	246	7	1	8	256	0	256	510
04:15 PM	2	220	222	11	4	15	252	3	255	492
04:30 PM	2	249	251	10	10	20	261	2	263	534
04:45 PM	1	227	228	11	11	22	238	6	244	494
Total	5	942	947	39	26	65	1007	11	1018	2030
05:00 PM	0	235	235	10	4	14	236	1	237	486
05:15 PM	2	224	226	9	3	12	248	6	254	492
05:30 PM	4	249	253	8	1	9	248	4	252	514
05:45 PM	8	229	237	7	2	9	253	14	267	513
Total	14	937	951	34	10	44	985	25	1010	2005
Grand Total	19	1879	1898	73	36	109	1992	36	2028	4035
Apprch %	1	99		67	33		98.2	1.8		
Total %	0.5	46.6	47	1.8	0.9	2.7	49.4	0.9	50.3	
Passenger Vehicles	17	1798	1815	59	32	91	1915	32	1947	3853
% Passenger Vehicles	89.5	95.7	95.6	80.8	88.9	83.5	96.1	88.9	96	95.5
Large 2 Axle Vehicles	1	30	31	2	0	2	31	1	32	65
% Large 2 Axle Vehicles	5.3	1.6	1.6	2.7	0	1.8	1.6	2.8	1.6	1.6
3 Axle Vehicles	0	23	23	1	2	3	13	0	13	39
% 3 Axle Vehicles	0	1.2	1.2	1.4	5.6	2.8	0.7	0	0.6	1
4+ Axle Trucks	1	28	29	11	2	13	33	3	36	78
% 4+ Axle Trucks	5.3	1.5	1.5	15.1	5.6	11.9	1.7	8.3	1.8	1.9

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	246	246	7	1	8	256	0	256	510
04:15 PM	**2**	220	222	**11**	4	15	252	3	255	492
04:30 PM	2	**249**	**251**	10	10	20	**261**	2	**263**	**534**
04:45 PM	1	227	228	11	**11**	**22**	238	**6**	244	494
Total Volume	5	942	947	39	26	65	1007	11	1018	2030
% App. Total	0.5	99.5		60	40		98.9	1.1		
PHF	.625	.946	.943	.886	.591	.739	.965	.458	.968	.950

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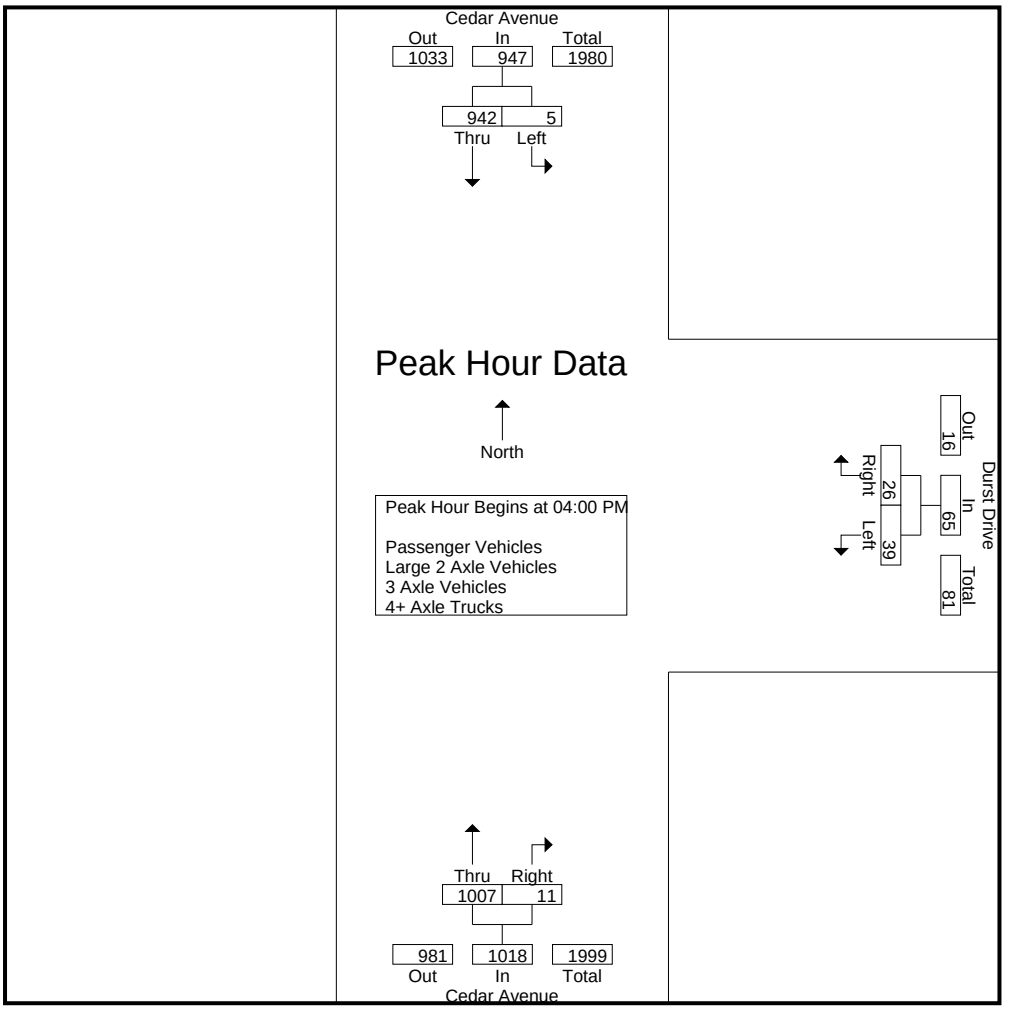

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			04:15 PM			04:00 PM		
+0 mins.	0	235	235	**11**	4	15	256	0	256
+15 mins.	2	224	226	10	10	20	252	3	255
+30 mins.	4	**249**	**253**	11	**11**	**22**	**261**	2	**263**
+45 mins.	**8**	229	237	10	4	14	238	**6**	244
Total Volume	14	937	951	42	29	71	1007	11	1018
% App. Total	1.5	98.5		59.2	40.8		98.9	1.1	
PHF	.438	.941	.940	.955	.659	.807	.965	.458	.968

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Groups Printed- Passenger Vehicles

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	235	235	4	1	5	244	0	244	484
04:15 PM	1	206	207	8	3	11	241	2	243	461
04:30 PM	1	237	238	10	9	19	251	2	253	510
04:45 PM	1	221	222	8	10	18	227	5	232	472
Total	3	899	902	30	23	53	963	9	972	1927
05:00 PM	0	221	221	8	3	11	228	1	229	461
05:15 PM	2	211	213	7	3	10	239	6	245	468
05:30 PM	4	244	248	8	1	9	238	3	241	498
05:45 PM	8	223	231	6	2	8	247	13	260	499
Total	14	899	913	29	9	38	952	23	975	1926
Grand Total	17	1798	1815	59	32	91	1915	32	1947	3853
Apprch %	0.9	99.1		64.8	35.2		98.4	1.6		
Total %	0.4	46.7	47.1	1.5	0.8	2.4	49.7	0.8	50.5	

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	235	235	4	1	5	244	0	244	484
04:15 PM	**1**	206	207	8	3	11	241	2	243	461
04:30 PM	1	**237**	**238**	**10**	9	**19**	**251**	2	**253**	**510**
04:45 PM	1	221	222	8	**10**	18	227	**5**	232	472
Total Volume	3	899	902	30	23	53	963	9	972	1927
% App. Total	0.3	99.7		56.6	43.4		99.1	0.9		
PHF	.750	.948	.947	.750	.575	.697	.959	.450	.960	.945

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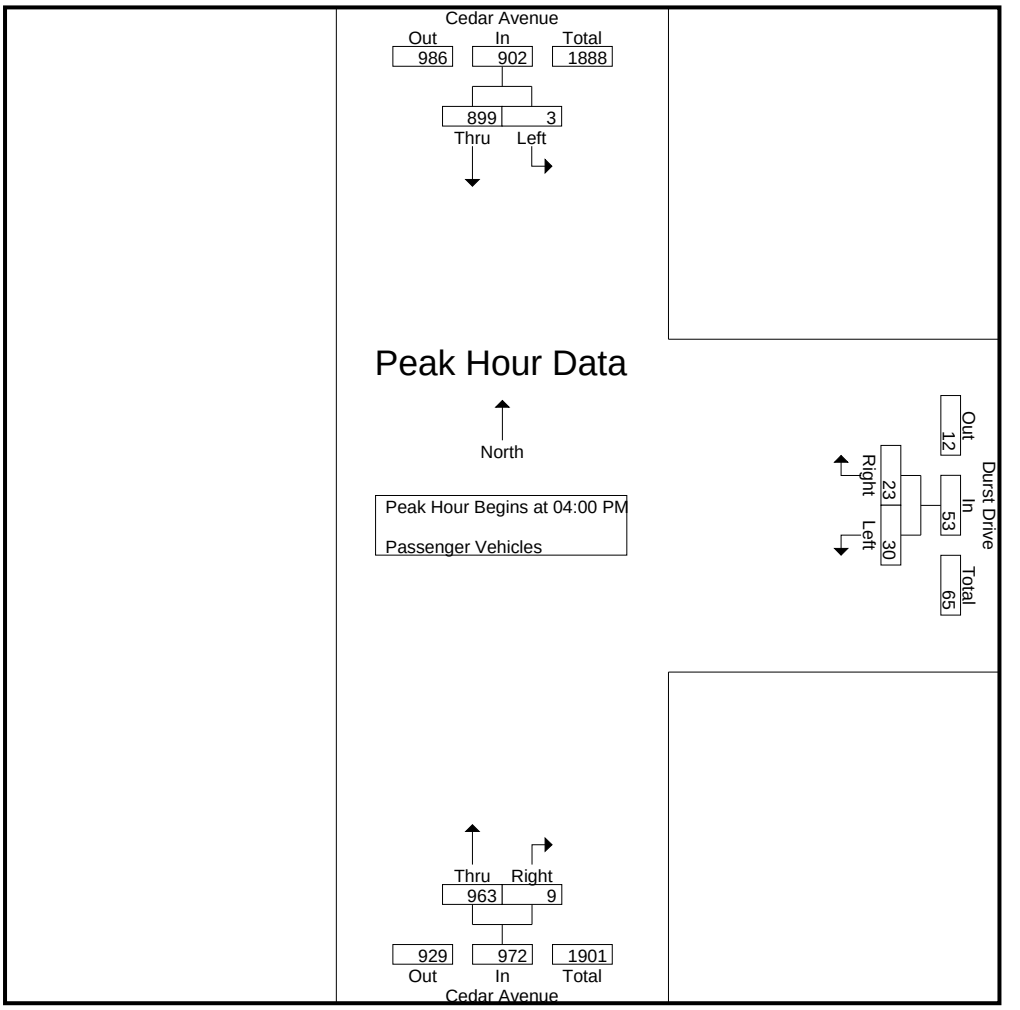

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	235	235	4	1	5	244	0	244
+15 mins.	**1**	206	207	8	3	11	241	2	243
+30 mins.	1	**237**	**238**	**10**	9	**19**	**251**	2	**253**
+45 mins.	1	221	222	8	**10**	18	227	**5**	232
Total Volume	3	899	902	30	23	53	963	9	972
% App. Total	0.3	99.7		56.6	43.4		99.1	0.9	
PHF	.750	.948	.947	.750	.575	.697	.959	.450	.960

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Groups Printed- Large 2 Axle Vehicles

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	7	7	1	0	1	5	0	5	13
04:15 PM	0	5	5	0	0	0	7	0	7	12
04:30 PM	1	3	4	0	0	0	3	0	3	7
04:45 PM	0	3	3	0	0	0	3	1	4	7
Total	1	18	19	1	0	1	18	1	19	39
05:00 PM	0	5	5	1	0	1	4	0	4	10
05:15 PM	0	2	2	0	0	0	4	0	4	6
05:30 PM	0	2	2	0	0	0	4	0	4	6
05:45 PM	0	3	3	0	0	0	1	0	1	4
Total	0	12	12	1	0	1	13	0	13	26
Grand Total	1	30	31	2	0	2	31	1	32	65
Apprch %	3.2	96.8		100	0		96.9	3.1		
Total %	1.5	46.2	47.7	3.1	0	3.1	47.7	1.5	49.2	

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	**7**	**7**	**1**	0	**1**	5	0	5	**13**
04:15 PM	0	5	5	0	0	0	**7**	0	**7**	12
04:30 PM	**1**	3	4	0	0	0	3	0	3	7
04:45 PM	0	3	3	0	0	0	3	**1**	4	7
Total Volume	1	18	19	1	0	1	18	1	19	39
% App. Total	5.3	94.7		100	0		94.7	5.3		
PHF	.250	.643	.679	.250	.000	.250	.643	.250	.679	.750

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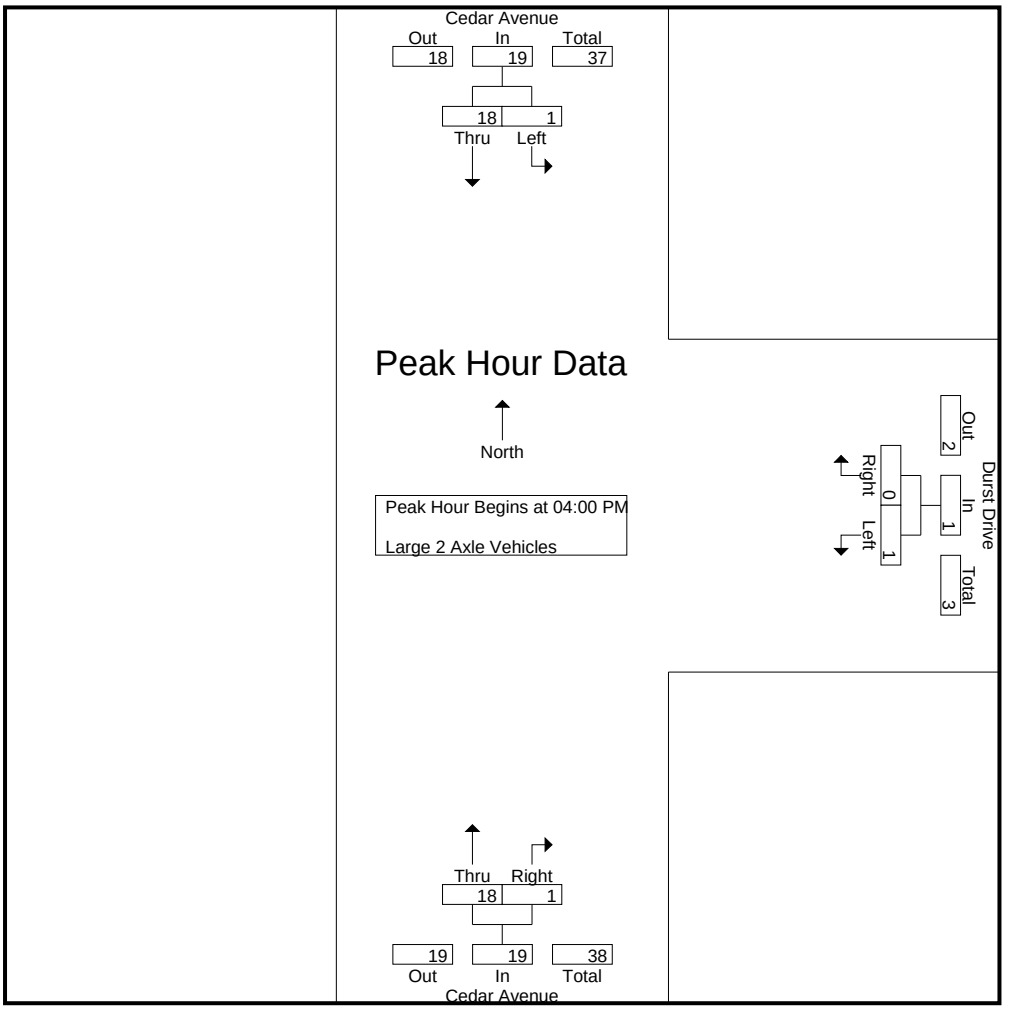
City of Rialto
N/S: Cedar Avenue
E/W: Durst Drive
Weather: Clear

File Name : 03_RLT_CE_Durst PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	**7**	**7**	**1**	0	**1**	5	0	5
+15 mins.	0	5	5	0	0	0	**7**	0	**7**
+30 mins.	**1**	3	4	0	0	0	3	0	3
+45 mins.	0	3	3	0	0	0	3	**1**	4
Total Volume	1	18	19	1	0	1	18	1	19
% App. Total	5.3	94.7		100	0		94.7	5.3	
PHF	.250	.643	.679	.250	.000	.250	.643	.250	.679

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City of Rialto
N/S: Cedar Avenue
E/W: Durst Drive
Weather: Clear

File Name : 03_RLT_CE_Durst PM
Site Code : 05121547
Start Date : 10/7/2021
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Groups Printed- 3 Axle Vehicles

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	2	0	2	2
04:15 PM	0	4	4	0	0	0	2	0	2	6
04:30 PM	0	5	5	0	1	1	1	0	1	7
04:45 PM	0	3	3	0	1	1	5	0	5	9
Total	0	12	12	0	2	2	10	0	10	24
05:00 PM	0	4	4	0	0	0	0	0	0	4
05:15 PM	0	4	4	1	0	1	1	0	1	6
05:30 PM	0	1	1	0	0	0	1	0	1	2
05:45 PM	0	2	2	0	0	0	1	0	1	3
Total	0	11	11	1	0	1	3	0	3	15
Grand Total	0	23	23	1	2	3	13	0	13	39
Apprch %	0	100		33.3	66.7		100	0		
Total %	0	59	59	2.6	5.1	7.7	33.3	0	33.3	

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	0	0	0	0	0	2	0	2	2
04:15 PM	0	4	4	0	0	0	2	0	2	6
04:30 PM	0	**5**	**5**	0	**1**	**1**	1	0	1	7
04:45 PM	0	3	3	0	1	1	**5**	0	**5**	**9**
Total Volume	0	12	12	0	2	2	10	0	10	24
% App. Total	0	100		0	100		100	0		
PHF	.000	.600	.600	.000	.500	.500	.500	.000	.500	.667

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City of Rialto
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File Name : 03_RLT_CE_Durst PM
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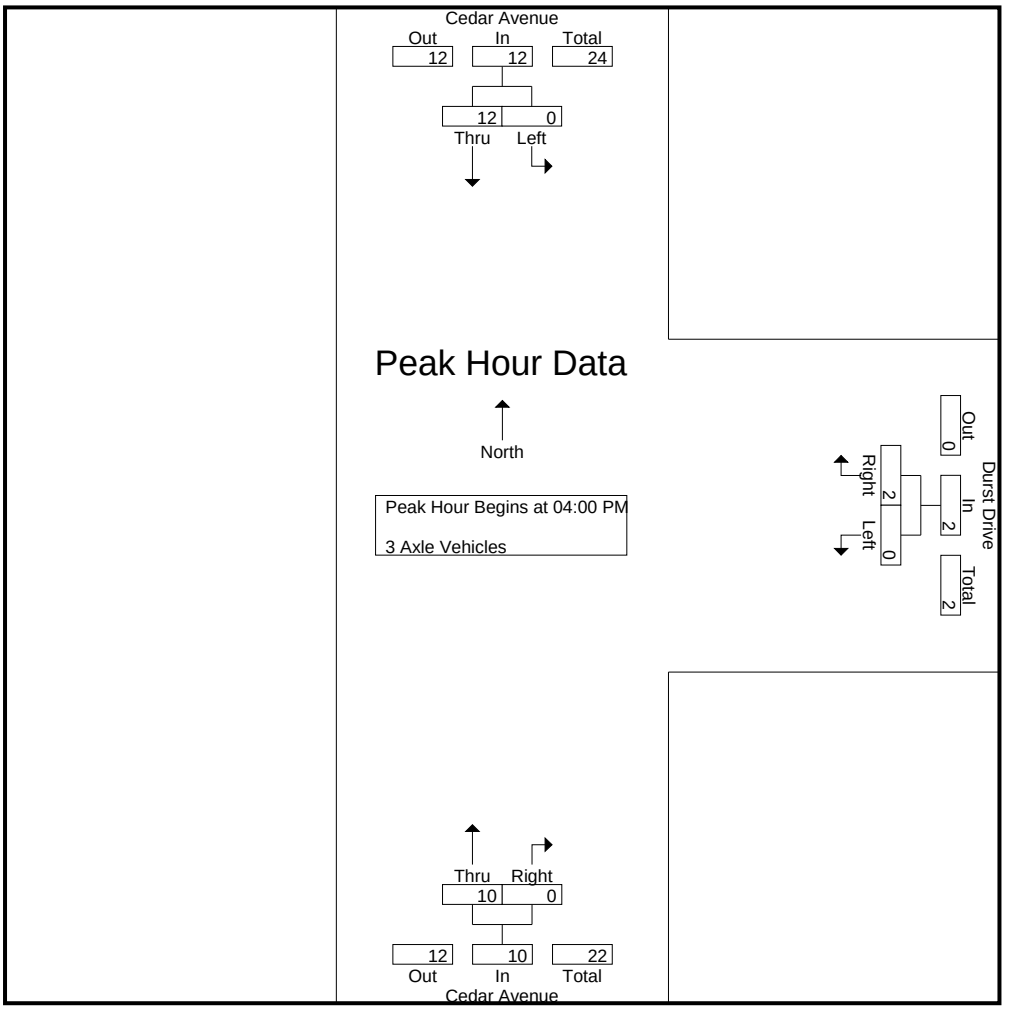

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	0	0	0	2	0	2
+15 mins.	0	4	4	0	0	0	2	0	2
+30 mins.	0	**5**	**5**	0	**1**	**1**	1	0	1
+45 mins.	0	3	3	0	1	1	**5**	0	**5**
Total Volume	0	12	12	0	2	2	10	0	10
% App. Total	0	100		0	100		100	0	
PHF	.000	.600	.600	.000	.500	.500	.500	.000	.500

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City of Rialto
N/S: Cedar Avenue
E/W: Durst Drive
Weather: Clear

File Name : 03_RLT_CE_Durst PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	4	4	2	0	2	5	0	5	11
04:15 PM	1	5	6	3	1	4	2	1	3	13
04:30 PM	0	4	4	0	0	0	6	0	6	10
04:45 PM	0	0	0	3	0	3	3	0	3	6
Total	1	13	14	8	1	9	16	1	17	40
05:00 PM	0	5	5	1	1	2	4	0	4	11
05:15 PM	0	7	7	1	0	1	4	0	4	12
05:30 PM	0	2	2	0	0	0	5	1	6	8
05:45 PM	0	1	1	1	0	1	4	1	5	7
Total	0	15	15	3	1	4	17	2	19	38
Grand Total	1	28	29	11	2	13	33	3	36	78
Apprch %	3.4	96.6		84.6	15.4		91.7	8.3		
Total %	1.3	35.9	37.2	14.1	2.6	16.7	42.3	3.8	46.2	

	Cedar Avenue Southbound			Durst Drive Westbound			Cedar Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	4	4	2	0	2	5	0	5	11
04:15 PM	**1**	**5**	**6**	**3**	**1**	**4**	2	**1**	3	**13**
04:30 PM	0	4	4	0	0	0	**6**	0	**6**	10
04:45 PM	0	0	0	3	0	3	3	0	3	6
Total Volume	1	13	14	8	1	9	16	1	17	40
% App. Total	7.1	92.9		88.9	11.1		94.1	5.9		
PHF	.250	.650	.583	.667	.250	.563	.667	.250	.708	.769

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City of Rialto
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File Name : 03_RLT_CE_Durst PM
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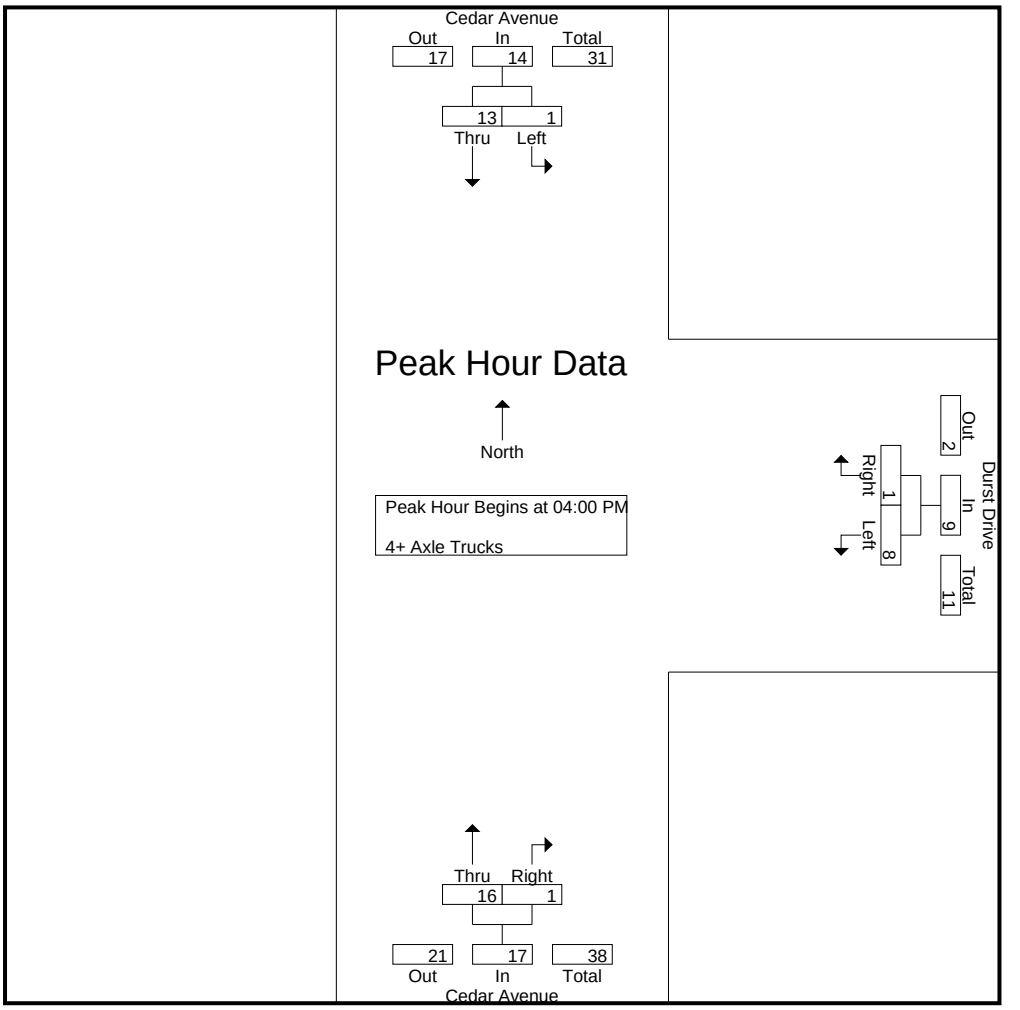

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	4	4	2	0	2	5	0	5
+15 mins.	**1**	**5**	**6**	**3**	**1**	**4**	2	**1**	3
+30 mins.	0	4	4	0	0	0	**6**	0	**6**
+45 mins.	0	0	0	3	0	3	3	0	3
Total Volume	1	13	14	8	1	9	16	1	17
% App. Total	7.1	92.9		88.9	11.1		94.1	5.9	
PHF	.250	.650	.583	.667	.250	.563	.667	.250	.708

Location: Rialto
N/S: Cedar Avenue
E/W: Durst Drive

Date: 10/7/2021
Day: Thursday

PEDESTRIANS

	North Leg Cedar Avenue	East Leg Durst Drive	South Leg Cedar Avenue	West Leg Durst Drive	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	4	0	0	4
8:00 AM	0	0	0	0	0
8:15 AM	0	3	0	0	3
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	7	0	0	7

	North Leg Cedar Avenue	East Leg Durst Drive	South Leg Cedar Avenue	West Leg Durst Drive	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	1	0	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	1	0	0	1
4:45 PM	0	6	0	0	6
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	1	0	0	1
TOTAL VOLUMES:	0	9	0	0	9

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Location: Rialto
N/S: Cedar Avenue
E/W: Durst Drive

Date: 10/7/2021
Day: Thursday

BICYCLES

	Southbound Cedar Avenue			Westbound Durst Drive			Northbound Cedar Avenue			Eastbound Durst Drive			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL VOLUMES:	0	1	0	0	0	0	0	2	0	0	0	0	3

	Southbound Cedar Avenue			Westbound Durst Drive			Northbound Cedar Avenue			Eastbound Durst Drive			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

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City of Rialto
N/S: Cedar Avenue
E/W: Merrill Avenue
Weather: Clear

File Name : 04_RLT_CE_Merrill AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Cedar Avenue Southbound					Merrill Avenue Westbound					Cedar Avenue Northbound					Merrill Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	13	175	21	0	209	9	43	19	10	71	15	186	5	1	206	24	30	7	13	61	24	547	571
07:15 AM	16	175	21	0	212	10	51	13	18	74	21	128	7	0	156	30	40	7	10	77	28	519	547
07:30 AM	30	166	22	3	218	10	68	9	16	87	10	148	9	2	167	28	54	7	12	89	33	561	594
07:45 AM	29	181	29	2	239	21	78	34	12	133	25	167	13	4	205	35	58	6	14	99	32	676	708
Total	88	697	93	5	878	50	240	75	56	365	71	629	34	7	734	117	182	27	49	326	117	2303	2420
08:00 AM	60	192	19	2	271	12	72	28	7	112	13	140	11	6	164	38	50	8	12	96	27	643	670
08:15 AM	57	187	15	4	259	14	42	22	11	78	15	110	4	1	129	26	28	3	15	57	31	523	554
08:30 AM	21	148	15	2	184	13	39	14	10	66	14	107	4	2	125	24	40	9	12	73	26	448	474
08:45 AM	18	146	13	2	177	13	44	17	13	74	6	125	9	0	140	26	41	8	10	75	25	466	491
Total	156	673	62	10	891	52	197	81	41	330	48	482	28	9	558	114	159	28	49	301	109	2080	2189
Grand Total	244	1370	155	15	1769	102	437	156	97	695	119	1111	62	16	1292	231	341	55	98	627	226	4383	4609
Apprch %	13.8	77.4	8.8			14.7	62.9	22.4			9.2	86	4.8			36.8	54.4	8.8					
Total %	5.6	31.3	3.5		40.4	2.3	10	3.6		15.9	2.7	25.3	1.4		29.5	5.3	7.8	1.3		14.3	4.9	95.1	
Passenger Vehicles	231	1266	152		1664	90	432	144		761	116	1018	44		1193	228	333	54		710	0	0	4328
% Passenger Vehicles	94.7	92.4	98.1	100	93.3	88.2	98.9	92.3	97.9	96.1	97.5	91.6	71	93.8	91.2	98.7	97.7	98.2	96.9	97.9	0	0	93.9
Large 2 Axle Vehicles	12	34	2		48	2	5	4		12	2	37	4		44	1	8	1		13	0	0	117
% Large 2 Axle Vehicles	4.9	2.5	1.3	0	2.7	2	1.1	2.6	1	1.5	1.7	3.3	6.5	6.2	3.4	0.4	2.3	1.8	3.1	1.8	0	0	2.5
3 Axle Vehicles	1	21	1		23	2	0	4		6	0	13	5		18	2	0	0		2	0	0	49
% 3 Axle Vehicles	0.4	1.5	0.6	0	1.3	2	0	2.6	0	0.8	0	1.2	8.1	0	1.4	0.9	0	0	0	0.3	0	0	1.1
4+ Axle Trucks	0	49	0		49	8	0	4		13	1	43	9		53	0	0	0		0	0	0	115
% 4+ Axle Trucks	0	3.6	0	0	2.7	7.8	0	2.6	1	1.6	0.8	3.9	14.5	0	4.1	0	0	0	0	0	0	0	2.5

	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	30	166	22	218	10	68	9	87	10	148	9	167	28	54	7	89	561
07:45 AM	29	181	**29**	239	**21**	**78**	**34**	**133**	**25**	**167**	**13**	**205**	35	**58**	6	**99**	**676**
08:00 AM	**60**	**192**	19	**271**	12	72	28	112	13	140	11	164	**38**	50	**8**	96	643
08:15 AM	57	187	15	259	14	42	22	78	15	110	4	129	26	28	3	57	523
Total Volume	176	726	85	987	57	260	93	410	63	565	37	665	127	190	24	341	2403
% App. Total	17.8	73.6	8.6		13.9	63.4	22.7		9.5	85	5.6		37.2	55.7	7		
PHF	.733	.945	.733	.911	.679	.833	.684	.771	.630	.846	.712	.811	.836	.819	.750	.861	.889

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City of Rialto
N/S: Cedar Avenue
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File Name : 04_RLT_CE_Merrill AM
Site Code : 05121547
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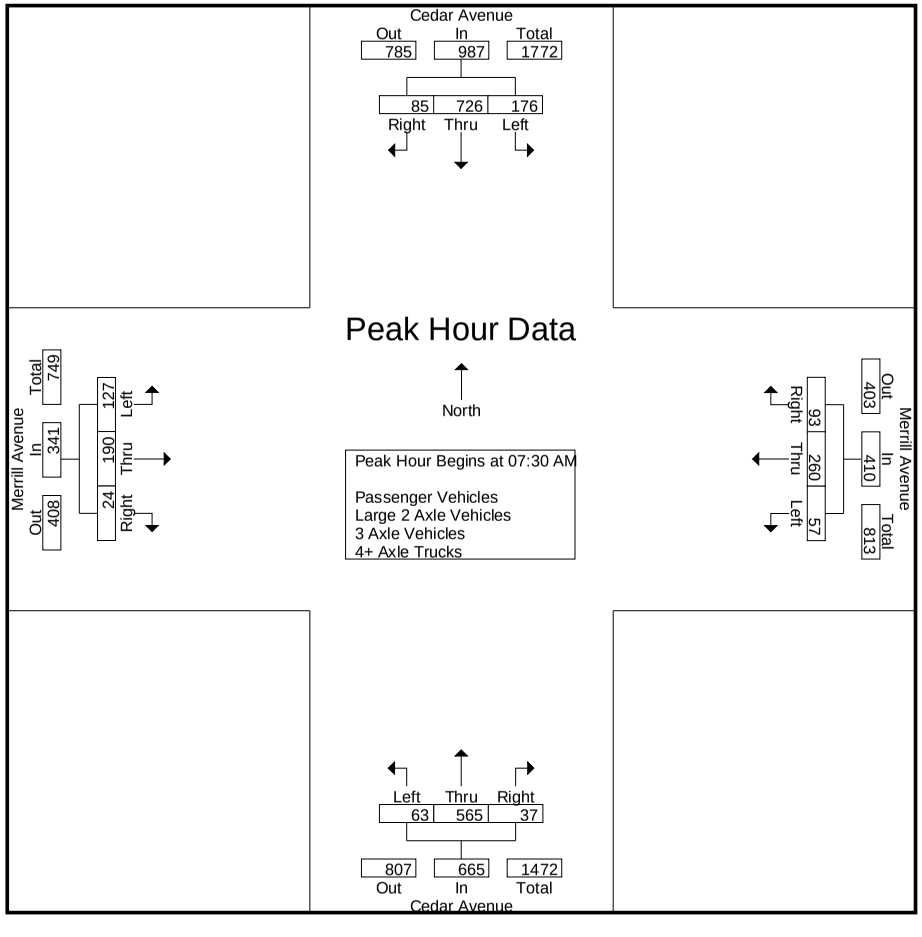

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City of Rialto
N/S: Cedar Avenue
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File Name : 04_RLT_CE_Merrill AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:30 AM				07:00 AM				07:15 AM				
+0 mins.	30	166	22	218	10	68	9	87	15	**186**	5	**206**	30	40	7	77	
+15 mins.	29	181	**29**	239	**21**	**78**	**34**	**133**	21	128	7	156	28	54	7	89	
+30 mins.	**60**	**192**	19	**271**	12	72	28	112	10	148	9	167	35	**58**	6	**99**	
+45 mins.	57	187	15	259	14	42	22	78	**25**	167	**13**	205	**38**	50	**8**	96	
Total Volume	176	726	85	987	57	260	93	410	71	629	34	734	131	202	28	361	
% App. Total	17.8	73.6	8.6		13.9	63.4	22.7		9.7	85.7	4.6		36.3	56	7.8		
PHF	.733	.945	.733	.911	.679	.833	.684	.771	.710	.845	.654	.891	.862	.871	.875	.912	

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Weather: Clear

File Name : 04_RLT_CE_Merrill AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Passenger Vehicles

	Cedar Avenue Southbound					Merrill Avenue Westbound					Cedar Avenue Northbound					Merrill Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	12	168	21	0	201	6	43	19	10	68	15	174	4	1	193	24	30	7	12	61	23	523	546
07:15 AM	15	161	19	0	195	9	50	11	16	70	20	114	5	0	139	30	39	7	10	76	26	480	506
07:30 AM	30	155	21	3	206	10	68	9	16	87	10	133	4	2	147	28	52	7	12	87	33	527	560
07:45 AM	26	173	29	2	228	19	76	33	12	128	24	162	10	4	196	35	57	6	13	98	31	650	681
Total	83	657	90	5	830	44	237	72	54	353	69	583	23	7	675	117	178	27	47	322	113	2180	2293
08:00 AM	57	180	19	2	256	9	72	26	7	107	12	126	8	5	146	38	48	8	11	94	25	603	628
08:15 AM	57	169	15	4	241	12	41	18	11	71	15	100	4	1	119	26	27	3	15	56	31	487	518
08:30 AM	18	128	15	2	161	13	38	12	10	63	14	97	3	2	114	22	39	9	12	70	26	408	434
08:45 AM	16	132	13	2	161	12	44	16	13	72	6	112	6	0	124	25	41	7	10	73	25	430	455
Total	148	609	62	10	819	46	195	72	41	313	47	435	21	8	503	111	155	27	48	293	107	1928	2035
Grand Total	231	1266	152	15	1649	90	432	144	95	666	116	1018	44	15	1178	228	333	54	95	615	220	4108	4328
Apprch %	14	76.8	9.2			13.5	64.9	21.6			9.8	86.4	3.7			37.1	54.1	8.8					
Total %	5.6	30.8	3.7		40.1	2.2	10.5	3.5		16.2	2.8	24.8	1.1		28.7	5.6	8.1	1.3		15	5.1	94.9	

	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	30	155	21	206	10	68	9	87	10	133	4	147	28	52	7	87	527
07:45 AM	26	173	**29**	228	**19**	**76**	**33**	**128**	**24**	**162**	**10**	**196**	35	**57**	6	**98**	**650**
08:00 AM	**57**	**180**	19	**256**	9	72	26	107	12	126	8	146	**38**	48	**8**	94	603
08:15 AM	57	169	15	241	12	41	18	71	15	100	4	119	26	27	3	56	487
Total Volume	170	677	84	931	50	257	86	393	61	521	26	608	127	184	24	335	2267
% App. Total	18.3	72.7	9		12.7	65.4	21.9		10	85.7	4.3		37.9	54.9	7.2		
PHF	.746	.940	.724	.909	.658	.845	.652	.768	.635	.804	.650	.776	.836	.807	.750	.855	.872

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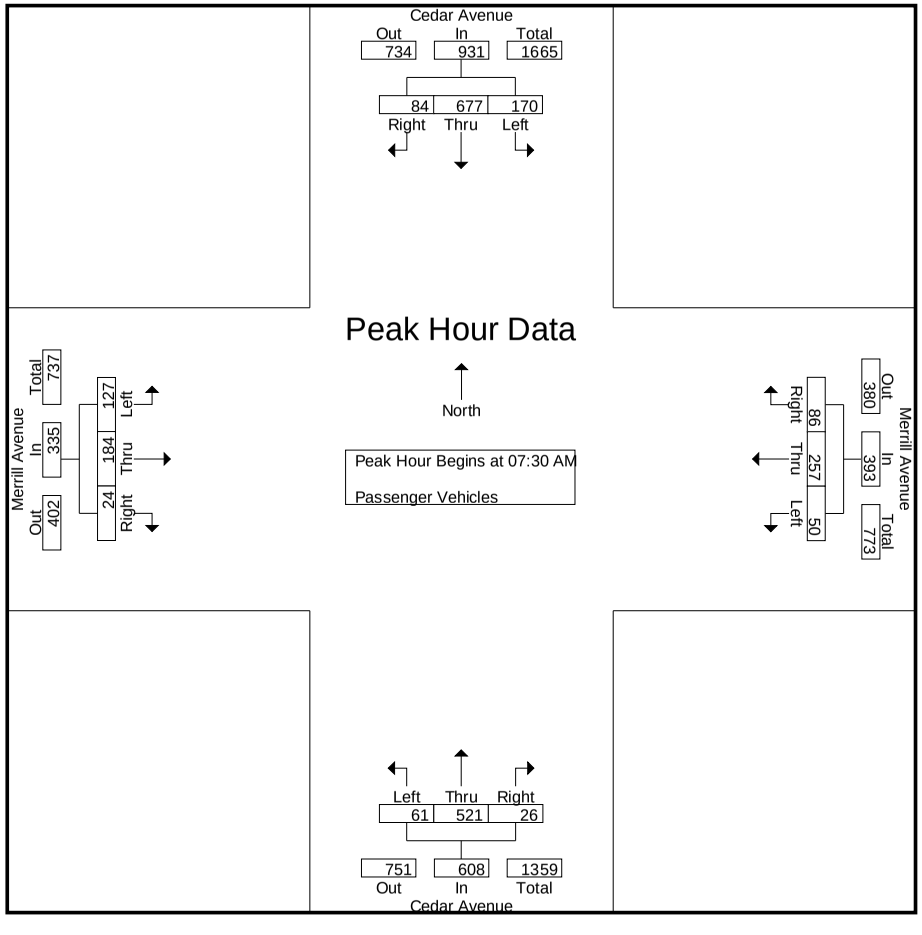
City of Rialto
N/S: Cedar Avenue
E/W: Merrill Avenue
Weather: Clear

File Name : 04_RLT_CE_Merrill AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
E/W: Merrill Avenue
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File Name : 04_RLT_CE_Merrill AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:30 AM				07:30 AM				07:30 AM				
+0 mins.	30	155	21	206	10	68	9	87	10	133	4	147	28	52	7	87	
+15 mins.	26	173	**29**	228	**19**	**76**	**33**	**128**	**24**	**162**	**10**	**196**	35	**57**	6	**98**	
+30 mins.	**57**	**180**	19	**256**	9	72	26	107	12	126	8	146	**38**	48	**8**	94	
+45 mins.	57	169	15	241	12	41	18	71	15	100	4	119	26	27	3	56	
Total Volume	170	677	84	931	50	257	86	393	61	521	26	608	127	184	24	335	
% App. Total	18.3	72.7	9		12.7	65.4	21.9		10	85.7	4.3		37.9	54.9	7.2		
PHF	.746	.940	.724	.909	.658	.845	.652	.768	.635	.804	.650	.776	.836	.807	.750	.855	

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City of Rialto
N/S: Cedar Avenue
E/W: Merrill Avenue
Weather: Clear

File Name : 04_RLT_CE_Merrill AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Cedar Avenue Southbound					Merrill Avenue Westbound					Cedar Avenue Northbound					Merrill Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	3	0	0	4	0	0	0	0	0	0	4	0	0	4	0	0	0	1	0	1	8	9
07:15 AM	0	4	2	0	6	0	1	0	1	1	1	7	1	0	9	0	1	0	0	1	1	17	18
07:30 AM	0	4	0	0	4	0	0	0	0	0	0	5	2	0	7	0	2	0	0	2	0	13	13
07:45 AM	3	2	0	0	5	0	2	1	0	3	1	5	0	0	6	0	1	0	1	1	1	15	16
Total	4	13	2	0	19	0	3	1	1	4	2	21	3	0	26	0	4	0	2	4	3	53	56
08:00 AM	3	5	0	0	8	1	0	2	0	3	0	5	0	1	5	0	2	0	1	2	2	18	20
08:15 AM	0	6	0	0	6	1	1	0	0	2	0	3	0	0	3	0	1	0	0	1	0	12	12
08:30 AM	3	7	0	0	10	0	1	1	0	2	0	2	0	0	2	1	1	0	0	2	0	16	16
08:45 AM	2	3	0	0	5	0	0	0	0	0	0	6	1	0	7	0	0	1	0	1	0	13	13
Total	8	21	0	0	29	2	2	3	0	7	0	16	1	1	17	1	4	1	1	6	2	59	61
Grand Total	12	34	2	0	48	2	5	4	1	11	2	37	4	1	43	1	8	1	3	10	5	112	117
Apprch %	25	70.8	4.2			18.2	45.5	36.4			4.7	86	9.3			10	80	10					
Total %	10.7	30.4	1.8		42.9	1.8	4.5	3.6		9.8	1.8	33	3.6		38.4	0.9	7.1	0.9		8.9	4.3	95.7	

	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	4	0	4	0	0	0	0	0	**5**	**2**	**7**	0	**2**	0	**2**	13
07:45 AM	**3**	2	0	5	0	**2**	1	**3**	**1**	5	0	6	0	1	0	1	15
08:00 AM	3	5	0	**8**	**1**	0	**2**	3	0	5	0	5	0	2	0	2	**18**
08:15 AM	0	**6**	0	6	1	1	0	2	0	3	0	3	0	1	0	1	12
Total Volume	6	17	0	23	2	3	3	8	1	18	2	21	0	6	0	6	58
% App. Total	26.1	73.9	0		25	37.5	37.5		4.8	85.7	9.5		0	100	0		
PHF	.500	.708	.000	.719	.500	.375	.375	.667	.250	.900	.250	.750	.000	.750	.000	.750	.806

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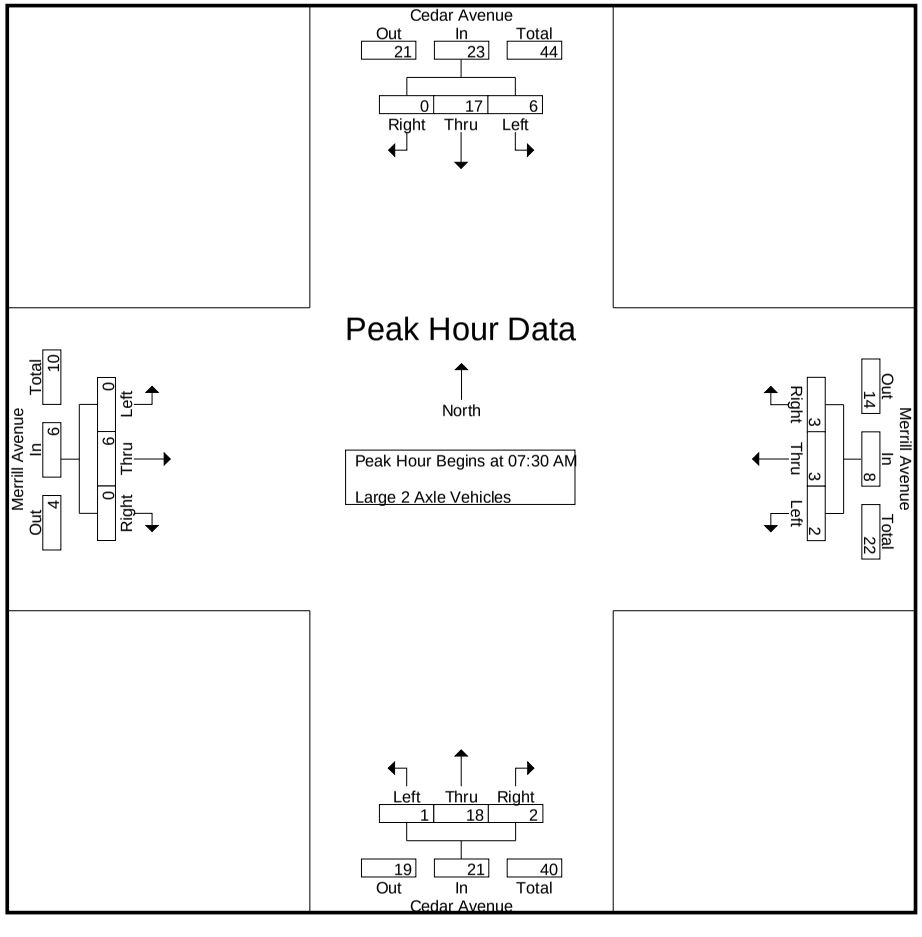
City of Rialto
N/S: Cedar Avenue
E/W: Merrill Avenue
Weather: Clear

File Name : 04_RLT_CE_Merrill AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
E/W: Merrill Avenue
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File Name : 04_RLT_CE_Merrill AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:30 AM				07:30 AM				07:30 AM				
+0 mins.	0	4	0	4	0	0	0	0	0	**5**	**2**	**7**	0	**2**	0	**2**	
+15 mins.	**3**	2	0	5	0	**2**	1	**3**	**1**	5	0	6	0	1	0	1	
+30 mins.	3	5	0	**8**	**1**	0	**2**	3	0	5	0	5	0	2	0	2	
+45 mins.	0	**6**	0	6	1	1	0	2	0	3	0	3	0	1	0	1	
Total Volume	6	17	0	23	2	3	3	8	1	18	2	21	0	6	0	6	
% App. Total	26.1	73.9	0		25	37.5	37.5		4.8	85.7	9.5		0	100	0		
PHF	.500	.708	.000	.719	.500	.375	.375	.667	.250	.900	.250	.750	.000	.750	.000	.750	

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City of Rialto
N/S: Cedar Avenue
E/W: Merrill Avenue
Weather: Clear

File Name : 04_RLT_CE_Merrill AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

	Cedar Avenue Southbound					Merrill Avenue Westbound					Cedar Avenue Northbound					Merrill Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	2	0	0	2	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	5	5
07:15 AM	1	2	0	0	3	1	0	1	0	2	0	3	0	0	3	0	0	0	0	0	0	8	8
07:30 AM	0	2	1	0	3	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	7	7
07:45 AM	0	2	0	0	2	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	4	4
Total	1	8	1	0	10	2	0	1	0	3	0	8	3	0	11	0	0	0	0	0	0	24	24
08:00 AM	0	4	0	0	4	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	0	7	7
08:15 AM	0	2	0	0	2	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	5	5
08:30 AM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	7	7
08:45 AM	0	3	0	0	3	0	0	1	0	1	0	1	0	0	1	1	0	0	0	1	0	6	6
Total	0	13	0	0	13	0	0	3	0	3	0	5	2	0	7	2	0	0	0	2	0	25	25
Grand Total	1	21	1	0	23	2	0	4	0	6	0	13	5	0	18	2	0	0	0	2	0	49	49
Apprch %	4.3	91.3	4.3			33.3	0	66.7			0	72.2	27.8			100	0	0					
Total %	2	42.9	2		46.9	4.1	0	8.2		12.2	0	26.5	10.2		36.7	4.1	0	0		4.1	0	100	

	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	2	**1**	3	0	0	0	0	0	**3**	1	**4**	0	0	0	0	**7**
07:45 AM	0	2	0	2	0	0	0	0	0	0	**2**	2	0	0	0	0	4
08:00 AM	0	**4**	0	**4**	0	0	0	0	0	1	2	3	0	0	0	0	7
08:15 AM	0	2	0	2	0	0	**2**	**2**	0	1	0	1	0	0	0	0	5
Total Volume	0	10	1	11	0	0	2	2	0	5	5	10	0	0	0	0	23
% App. Total	0	90.9	9.1		0	0	100		0	50	50		0	0	0		
PHF	.000	.625	.250	.688	.000	.000	.250	.250	.000	.417	.625	.625	.000	.000	.000	.000	.821

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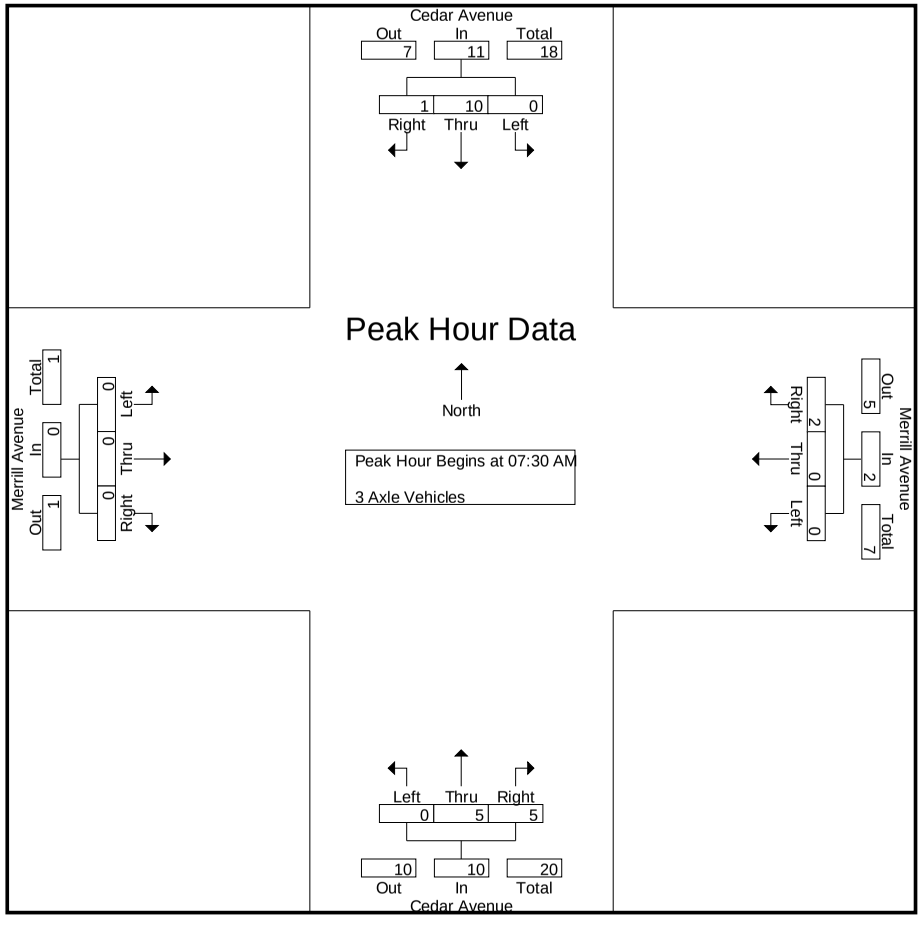
City of Rialto
N/S: Cedar Avenue
E/W: Merrill Avenue
Weather: Clear

File Name : 04_RLT_CE_Merrill AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
E/W: Merrill Avenue
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File Name : 04_RLT_CE_Merrill AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:30 AM				07:30 AM				07:30 AM				
+0 mins.	0	2	**1**	3	0	0	0	0	0	**3**	1	**4**	0	0	0	0	
+15 mins.	0	2	0	2	0	0	0	0	0	0	**2**	2	0	0	0	0	
+30 mins.	0	**4**	0	**4**	0	0	0	0	0	1	2	3	0	0	0	0	
+45 mins.	0	2	0	2	0	0	**2**	**2**	0	1	0	1	0	0	0	0	
Total Volume	0	10	1	11	0	0	2	2	0	5	5	10	0	0	0	0	
% App. Total	0	90.9	9.1		0	0	100		0	50	50		0	0	0		
PHF	.000	.625	.250	.688	.000	.000	.250	.250	.000	.417	.625	.625	.000	.000	.000	.000	

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City of Rialto
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File Name : 04_RLT_CE_Merrill AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

	Cedar Avenue Southbound					Merrill Avenue Westbound					Cedar Avenue Northbound					Merrill Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	2	0	0	2	2	0	0	0	2	0	6	1	0	7	0	0	0	0	0	0	11	11
07:15 AM	0	8	0	0	8	0	0	1	1	1	0	4	1	0	5	0	0	0	0	0	1	14	15
07:30 AM	0	5	0	0	5	0	0	0	0	0	0	7	2	0	9	0	0	0	0	0	0	14	14
07:45 AM	0	4	0	0	4	2	0	0	0	2	0	0	1	0	1	0	0	0	0	0	0	7	7
Total	0	19	0	0	19	4	0	1	1	5	0	17	5	0	22	0	0	0	0	0	1	46	47
08:00 AM	0	3	0	0	3	2	0	0	0	2	1	8	1	0	10	0	0	0	0	0	0	15	15
08:15 AM	0	10	0	0	10	1	0	2	0	3	0	6	0	0	6	0	0	0	0	0	0	19	19
08:30 AM	0	9	0	0	9	0	0	1	0	1	0	6	1	0	7	0	0	0	0	0	0	17	17
08:45 AM	0	8	0	0	8	1	0	0	0	1	0	6	2	0	8	0	0	0	0	0	0	17	17
Total	0	30	0	0	30	4	0	3	0	7	1	26	4	0	31	0	0	0	0	0	0	68	68
Grand Total	0	49	0	0	49	8	0	4	1	12	1	43	9	0	53	0	0	0	0	0	1	114	115
Apprch %	0	100	0			66.7	0	33.3			1.9	81.1	17			0	0	0					
Total %	0	43	0		43	7	0	3.5		10.5	0.9	37.7	7.9		46.5	0	0	0		0	0.9	99.1	

	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	5	0	5	0	0	0	0	0	7	**2**	9	0	0	0	0	14
07:45 AM	0	4	0	4	**2**	0	0	2	0	0	1	1	0	0	0	0	7
08:00 AM	0	3	0	3	2	0	0	2	**1**	**8**	1	**10**	0	0	0	0	15
08:15 AM	0	**10**	0	**10**	1	0	**2**	**3**	0	6	0	6	0	0	0	0	**19**
Total Volume	0	22	0	22	5	0	2	7	1	21	4	26	0	0	0	0	55
% App. Total	0	100	0		71.4	0	28.6		3.8	80.8	15.4		0	0	0		
PHF	.000	.550	.000	.550	.625	.000	.250	.583	.250	.656	.500	.650	.000	.000	.000	.000	.724

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City of Rialto
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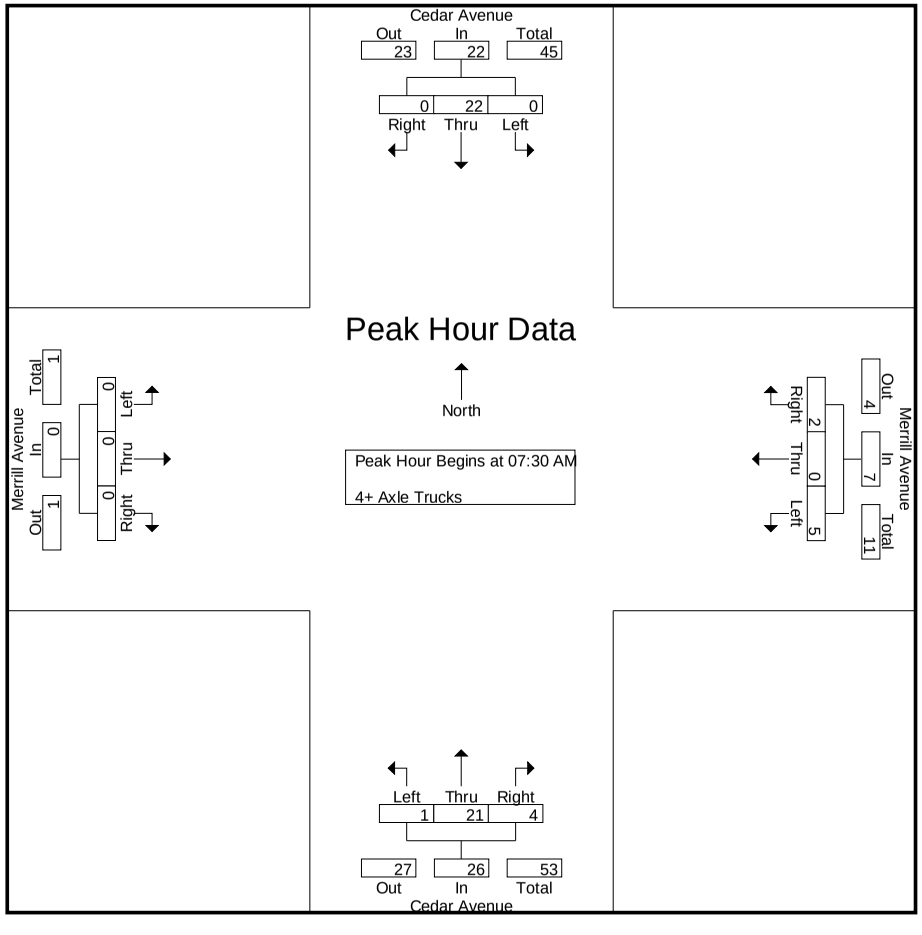
File Name : 04_RLT_CE_Merrill AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
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File Name : 04_RLT_CE_Merrill AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:30 AM				07:30 AM				07:30 AM				
+0 mins.	0	5	0	5	0	0	0	0	0	7	**2**	9	0	0	0	0	
+15 mins.	0	4	0	4	**2**	0	0	2	0	0	1	1	0	0	0	0	
+30 mins.	0	3	0	3	2	0	0	2	**1**	**8**	1	**10**	0	0	0	0	
+45 mins.	0	**10**	0	**10**	1	0	**2**	**3**	0	6	0	6	0	0	0	0	
Total Volume	0	22	0	22	5	0	2	7	1	21	4	26	0	0	0	0	
% App. Total	0	100	0		71.4	0	28.6		3.8	80.8	15.4		0	0	0		
PHF	.000	.550	.000	.550	.625	.000	.250	.583	.250	.656	.500	.650	.000	.000	.000	.000	

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City of Rialto
N/S: Cedar Avenue
E/W: Merrill Avenue
Weather: Clear

File Name : 04_RLT_CE_Merrill PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Cedar Avenue Southbound					Merrill Avenue Westbound					Cedar Avenue Northbound					Merrill Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	20	184	28	4	232	13	62	40	12	115	12	170	13	0	195	37	86	11	3	134	19	676	695
04:15 PM	21	197	27	1	245	13	60	22	7	95	14	209	6	2	229	23	47	27	13	97	23	666	689
04:30 PM	37	181	19	3	237	14	69	40	13	123	23	187	7	0	217	33	79	20	15	132	31	709	740
04:45 PM	42	185	15	0	242	8	49	28	9	85	14	178	13	1	205	31	83	24	13	138	23	670	693
Total	120	747	89	8	956	48	240	130	41	418	63	744	39	3	846	124	295	82	44	501	96	2721	2817
05:00 PM	24	180	31	2	235	13	53	27	12	93	15	167	7	1	189	41	94	22	11	157	26	674	700
05:15 PM	43	167	20	2	230	16	48	31	6	95	17	199	12	1	228	23	81	13	5	117	14	670	684
05:30 PM	28	171	24	2	223	11	58	38	14	107	11	182	12	1	205	23	81	18	9	122	26	657	683
05:45 PM	30	190	31	2	251	10	50	39	17	99	11	202	4	1	217	39	68	14	8	121	28	688	716
Total	125	708	106	8	939	50	209	135	49	394	54	750	35	4	839	126	324	67	33	517	94	2689	2783
Grand Total	245	1455	195	16	1895	98	449	265	90	812	117	1494	74	7	1685	250	619	149	77	1018	190	5410	5600
Apprch %	12.9	76.8	10.3			12.1	55.3	32.6			6.9	88.7	4.4			24.6	60.8	14.6					
Total %	4.5	26.9	3.6		35	1.8	8.3	4.9		15	2.2	27.6	1.4		31.1	4.6	11.4	2.8		18.8	3.4	96.6	
Passenger Vehicles	237	1359	194		1806	93	443	261		886	115	1429	61		1612	249	611	146		1082	0	0	5386
% Passenger Vehicles	96.7	93.4	99.5	100	94.5	94.9	98.7	98.5	98.9	98.2	98.3	95.6	82.4	100	95.3	99.6	98.7	98	98.7	98.8	0	0	96.2
Large 2 Axle Vehicles	5	29	1		35	2	6	3		12	2	13	0		15	1	7	3		12	0	0	74
% Large 2 Axle Vehicles	2	2	0.5	0	1.8	2	1.3	1.1	1.1	1.3	1.7	0.9	0	0	0.9	0.4	1.1	2	1.3	1.1	0	0	1.3
3 Axle Vehicles	0	25	0		25	1	0	1		2	0	11	5		16	0	1	0		1	0	0	44
% 3 Axle Vehicles	0	1.7	0	0	1.3	1	0	0.4	0	0.2	0	0.7	6.8	0	0.9	0	0.2	0	0	0.1	0	0	0.8
4+ Axle Trucks	3	42	0		45	2	0	0		2	0	41	8		49	0	0	0		0	0	0	96
% 4+ Axle Trucks	1.2	2.9	0	0	2.4	2	0	0	0	0.2	0	2.7	10.8	0	2.9	0	0	0	0	0	0	0	1.7

	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	37	181	19	237	14	**69**	**40**	**123**	**23**	187	7	217	33	79	20	132	**709**
04:45 PM	42	**185**	15	**242**	8	49	28	85	14	178	**13**	205	31	83	**24**	138	670
05:00 PM	24	180	**31**	235	13	53	27	93	15	167	7	189	**41**	**94**	22	**157**	674
05:15 PM	**43**	167	20	230	**16**	48	31	95	17	**199**	12	**228**	23	81	13	117	670
Total Volume	146	713	85	944	51	219	126	396	69	731	39	839	128	337	79	544	2723
% App. Total	15.5	75.5	9		12.9	55.3	31.8		8.2	87.1	4.6		23.5	61.9	14.5		
PHF	.849	.964	.685	.975	.797	.793	.788	.805	.750	.918	.750	.920	.780	.896	.823	.866	.960

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City of Rialto
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Weather: Clear

File Name : 04_RLT_CE_Merrill PM
Site Code : 05121547
Start Date : 10/7/2021
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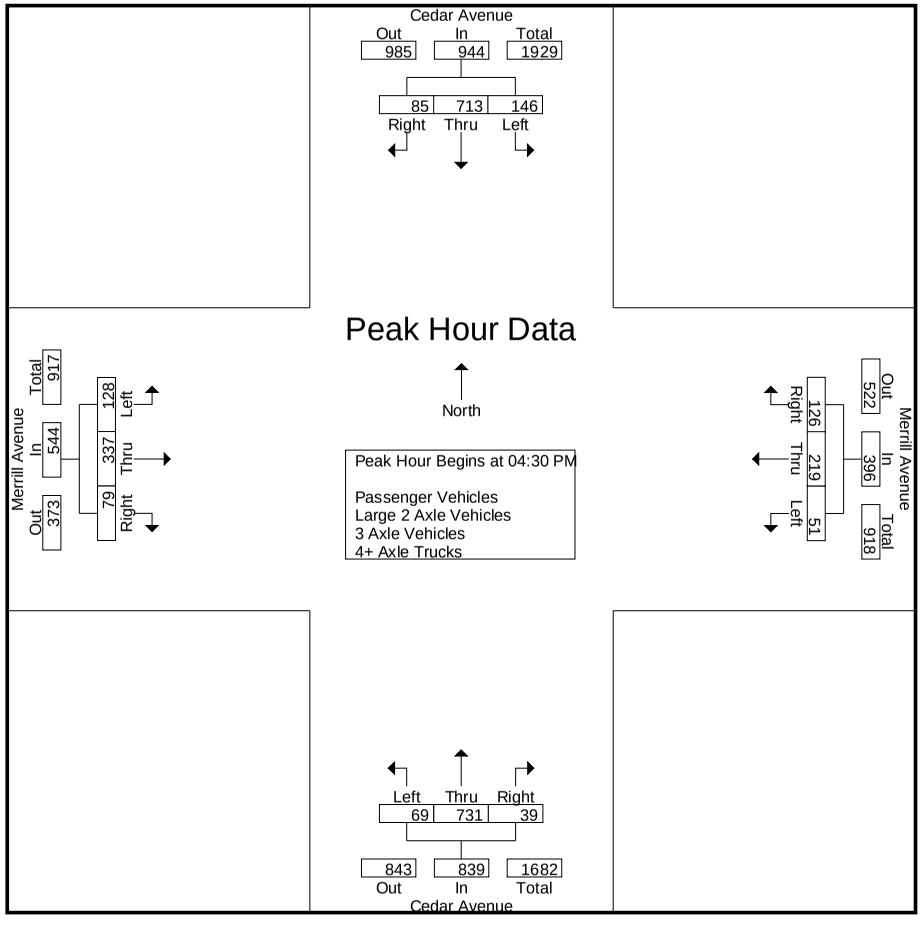

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Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:00 PM				04:00 PM				04:30 PM				
+0 mins.	21	**197**	27	**245**	13	62	**40**	115	12	170	**13**	195	33	79	20	132	
+15 mins.	37	181	19	237	13	60	22	95	14	**209**	6	**229**	31	83	**24**	138	
+30 mins.	**42**	185	15	242	**14**	**69**	40	**123**	**23**	187	7	217	**41**	**94**	22	**157**	
+45 mins.	24	180	**31**	235	8	49	28	85	14	178	13	205	23	81	13	117	
Total Volume	124	743	92	959	48	240	130	418	63	744	39	846	128	337	79	544	
% App. Total	12.9	77.5	9.6		11.5	57.4	31.1		7.4	87.9	4.6		23.5	61.9	14.5		
PHF	.738	.943	.742	.979	.857	.870	.813	.850	.685	.890	.750	.924	.780	.896	.823	.866	

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Groups Printed- Passenger Vehicles

	Cedar Avenue Southbound					Merrill Avenue Westbound					Cedar Avenue Northbound					Merrill Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	19	172	27	4	218	12	61	40	12	113	12	160	10	0	182	37	84	9	2	130	18	643	661
04:15 PM	19	177	27	1	223	11	60	21	7	92	13	199	4	2	216	23	46	26	13	95	23	626	649
04:30 PM	36	166	19	3	221	13	67	40	13	120	22	178	7	0	207	33	78	20	15	131	31	679	710
04:45 PM	41	175	15	0	231	8	48	28	9	84	14	169	10	1	193	31	82	24	13	137	23	645	668
Total	115	690	88	8	893	44	236	129	41	409	61	706	31	3	798	124	290	79	43	493	95	2593	2688
05:00 PM	24	166	31	2	221	12	53	26	12	91	15	162	7	1	184	40	93	22	11	155	26	651	677
05:15 PM	42	152	20	2	214	16	47	31	6	94	17	191	11	1	219	23	79	13	5	115	14	642	656
05:30 PM	27	166	24	2	217	11	58	37	13	106	11	174	8	1	193	23	81	18	9	122	25	638	663
05:45 PM	29	185	31	2	245	10	49	38	17	97	11	196	4	1	211	39	68	14	8	121	28	674	702
Total	122	669	106	8	897	49	207	132	48	388	54	723	30	4	807	125	321	67	33	513	93	2605	2698
Grand Total	237	1359	194	16	1790	93	443	261	89	797	115	1429	61	7	1605	249	611	146	76	1006	188	5198	5386
Apprch %	13.2	75.9	10.8			11.7	55.6	32.7			7.2	89	3.8			24.8	60.7	14.5					
Total %	4.6	26.1	3.7		34.4	1.8	8.5	5		15.3	2.2	27.5	1.2		30.9	4.8	11.8	2.8		19.4	3.5	96.5	

	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	36	166	19	221	13	**67**	**40**	**120**	**22**	178	7	207	33	78	20	131	**679**
04:45 PM	41	**175**	15	**231**	8	48	28	84	14	169	10	193	31	82	**24**	137	645
05:00 PM	24	166	**31**	221	12	53	26	91	15	162	7	184	**40**	**93**	22	**155**	651
05:15 PM	**42**	152	20	214	**16**	47	31	94	17	**191**	**11**	**219**	23	79	13	115	642
Total Volume	143	659	85	887	49	215	125	389	68	700	35	803	127	332	79	538	2617
% App. Total	16.1	74.3	9.6		12.6	55.3	32.1		8.5	87.2	4.4		23.6	61.7	14.7		
PHF	.851	.941	.685	.960	.766	.802	.781	.810	.773	.916	.795	.917	.794	.892	.823	.868	.964

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City of Rialto
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File Name : 04_RLT_CE_Merrill PM
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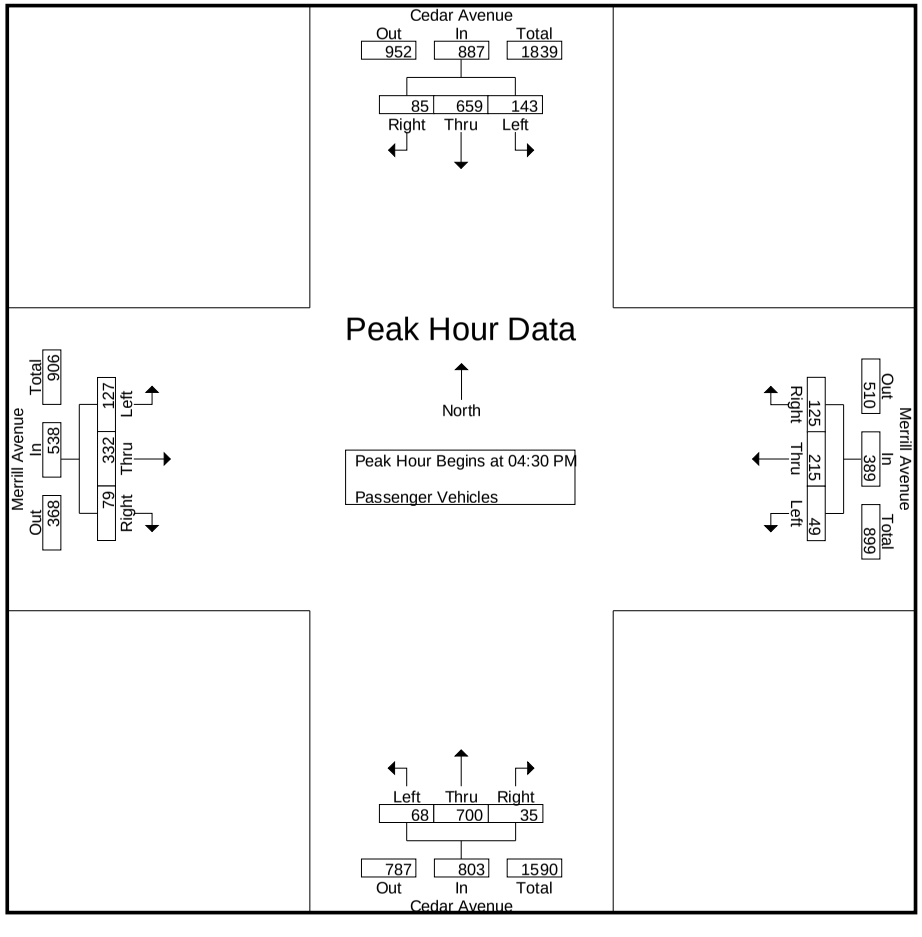

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N/S: Cedar Avenue
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	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	36	166	19	221	13	**67**	**40**	**120**	**22**	178	7	207	33	78	20	131	
+15 mins.	41	**175**	15	**231**	8	48	28	84	14	169	10	193	31	82	**24**	137	
+30 mins.	24	166	**31**	221	12	53	26	91	15	162	7	184	**40**	**93**	22	**155**	
+45 mins.	**42**	152	20	214	**16**	47	31	94	17	**191**	**11**	**219**	23	79	13	115	
Total Volume	143	659	85	887	49	215	125	389	68	700	35	803	127	332	79	538	
% App. Total	16.1	74.3	9.6		12.6	55.3	32.1		8.5	87.2	4.4		23.6	61.7	14.7		
PHF	.851	.941	.685	.960	.766	.802	.781	.810	.773	.916	.795	.917	.794	.892	.823	.868	

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Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Cedar Avenue Southbound					Merrill Avenue Westbound					Cedar Avenue Northbound					Merrill Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	7	1	0	9	1	1	0	0	2	0	3	0	0	3	0	2	2	1	4	1	18	19
04:15 PM	1	7	0	0	8	1	0	1	0	2	1	2	0	0	3	0	1	1	0	2	0	15	15
04:30 PM	1	3	0	0	4	0	2	0	0	2	1	1	0	0	2	0	1	0	0	1	0	9	9
04:45 PM	1	4	0	0	5	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	7	7
Total	4	21	1	0	26	2	4	1	0	7	2	7	0	0	9	0	4	3	1	7	1	49	50
05:00 PM	0	4	0	0	4	0	0	1	0	1	0	1	0	0	1	1	1	0	0	2	0	8	8
05:15 PM	1	1	0	0	2	0	1	0	0	1	0	3	0	0	3	0	2	0	0	2	0	8	8
05:30 PM	0	1	0	0	1	0	0	1	1	1	0	1	0	0	1	0	0	0	0	0	1	3	4
05:45 PM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	4	4
Total	1	8	0	0	9	0	2	2	1	4	0	6	0	0	6	1	3	0	0	4	1	23	24
Grand Total	5	29	1	0	35	2	6	3	1	11	2	13	0	0	15	1	7	3	1	11	2	72	74
Apprch %	14.3	82.9	2.9			18.2	54.5	27.3			13.3	86.7	0			9.1	63.6	27.3					
Total %	6.9	40.3	1.4		48.6	2.8	8.3	4.2		15.3	2.8	18.1	0		20.8	1.4	9.7	4.2		15.3	2.7	97.3	

	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**1**	3	0	4	0	**2**	0	**2**	**1**	1	0	2	0	1	0	1	**9**
04:45 PM	1	**4**	0	**5**	0	1	0	1	0	1	0	1	0	0	0	0	7
05:00 PM	0	4	0	4	0	0	**1**	1	0	1	0	1	**1**	1	0	**2**	8
05:15 PM	1	1	0	2	0	1	0	1	0	**3**	0	**3**	0	**2**	0	2	8
Total Volume	3	12	0	15	0	4	1	5	1	6	0	7	1	4	0	5	32
% App. Total	20	80	0		0	80	20		14.3	85.7	0		20	80	0		
PHF	.750	.750	.000	.750	.000	.500	.250	.625	.250	.500	.000	.583	.250	.500	.000	.625	.889

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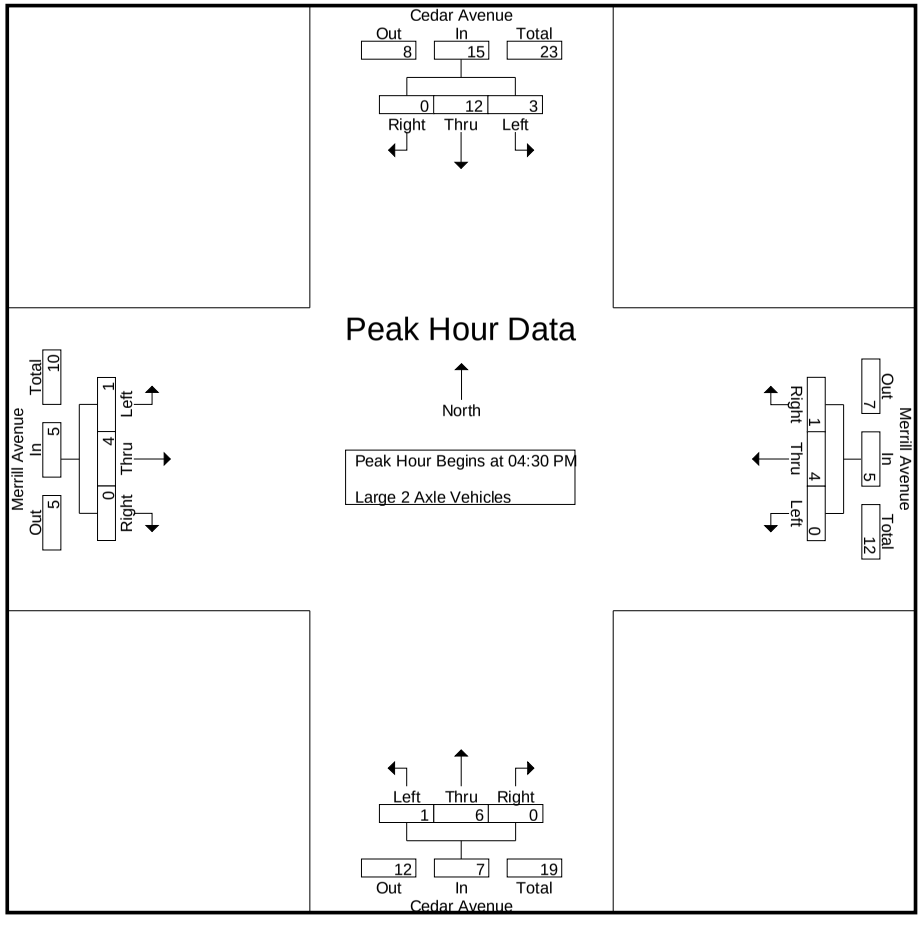

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	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	**1**	3	0	4	0	**2**	0	**2**	**1**	1	0	2	0	1	0	1	
+15 mins.	1	**4**	0	**5**	0	1	0	1	0	1	0	1	0	0	0	0	
+30 mins.	0	4	0	4	0	0	**1**	1	0	1	0	1	**1**	1	0	**2**	
+45 mins.	1	1	0	2	0	1	0	1	0	**3**	0	**3**	0	**2**	0	2	
Total Volume	3	12	0	15	0	4	1	5	1	6	0	7	1	4	0	5	
% App. Total	20	80	0		0	80	20		14.3	85.7	0		20	80	0		
PHF	.750	.750	.000	.750	.000	.500	.250	.625	.250	.500	.000	.583	.250	.500	.000	.625	

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Groups Printed- 3 Axle Vehicles

	Cedar Avenue Southbound					Merrill Avenue Westbound					Cedar Avenue Northbound					Merrill Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	2
04:15 PM	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	7	7
04:30 PM	0	6	0	0	6	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	8	8
04:45 PM	0	2	0	0	2	0	0	0	0	0	0	5	1	0	6	0	1	0	0	1	0	9	9
Total	0	13	0	0	13	1	0	0	0	1	0	10	1	0	11	0	1	0	0	1	0	26	26
05:00 PM	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
05:15 PM	0	5	0	0	5	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	6	6
05:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	3	0	4	0	0	0	0	0	0	5	5
05:45 PM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
Total	0	12	0	0	12	0	0	1	0	1	0	1	4	0	5	0	0	0	0	0	0	18	18
Grand Total	0	25	0	0	25	1	0	1	0	2	0	11	5	0	16	0	1	0	0	1	0	44	44
Apprch %	0	100	0			50	0	50			0	68.8	31.2			0	100	0					
Total %	0	56.8	0		56.8	2.3	0	2.3		4.5	0	25	11.4		36.4	0	2.3	0		2.3	0	100	

	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**6**	0	**6**	**1**	0	0	**1**	0	1	0	1	0	0	0	0	8
04:45 PM	0	2	0	2	0	0	0	0	0	**5**	**1**	**6**	0	**1**	0	**1**	**9**
05:00 PM	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
05:15 PM	0	5	0	5	0	0	0	0	0	0	1	1	0	0	0	0	6
Total Volume	0	18	0	18	1	0	0	1	0	6	2	8	0	1	0	1	28
% App. Total	0	100	0		100	0	0		0	75	25		0	100	0		
PHF	.000	.750	.000	.750	.250	.000	.000	.250	.000	.300	.500	.333	.000	.250	.000	.250	.778

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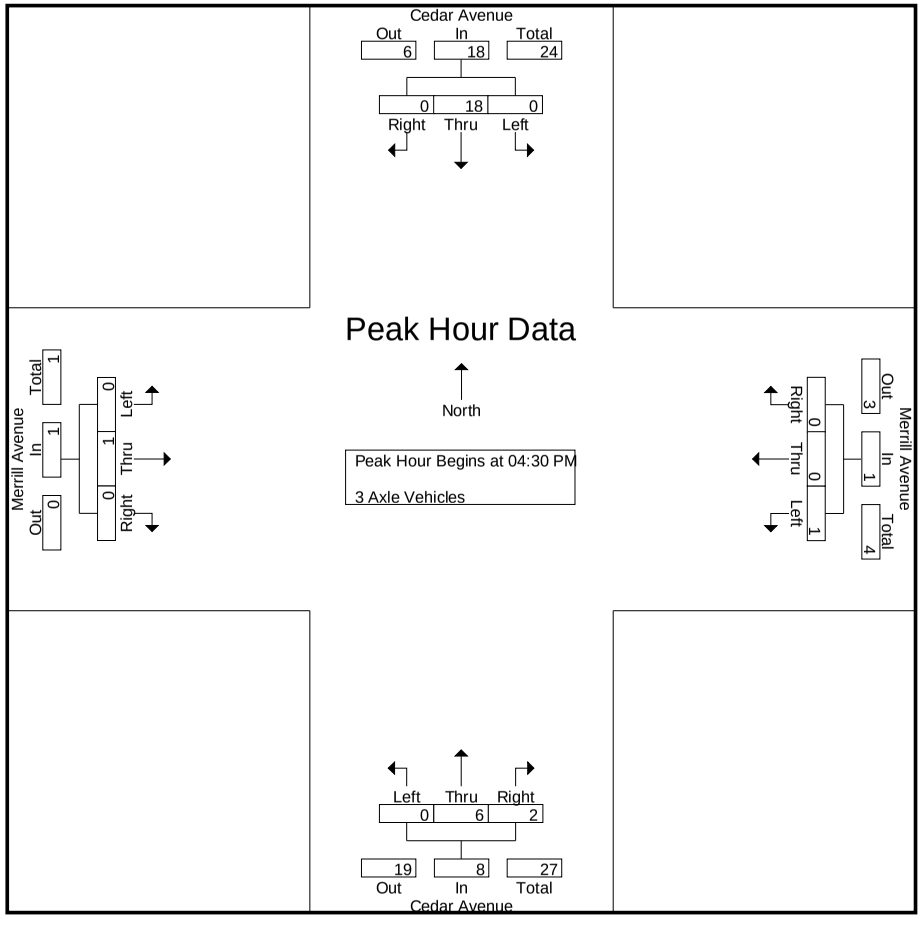
City of Rialto
N/S: Cedar Avenue
E/W: Merrill Avenue
Weather: Clear

File Name : 04_RLT_CE_Merrill PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
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	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	**6**	0	**6**	**1**	0	0	**1**	0	1	0	1	0	0	0	0	
+15 mins.	0	2	0	2	0	0	0	0	0	**5**	**1**	**6**	0	**1**	0	**1**	
+30 mins.	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	5	0	5	0	0	0	0	0	0	1	1	0	0	0	0	
Total Volume	0	18	0	18	1	0	0	1	0	6	2	8	0	1	0	1	
% App. Total	0	100	0		100	0	0		0	75	25		0	100	0		
PHF	.000	.750	.000	.750	.250	.000	.000	.250	.000	.300	.500	.333	.000	.250	.000	.250	

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City of Rialto
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File Name : 04_RLT_CE_Merrill PM
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Start Date : 10/7/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

	Cedar Avenue Southbound					Merrill Avenue Westbound					Cedar Avenue Northbound					Merrill Avenue Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	5	0	0	5	0	0	0	0	0	0	5	3	0	8	0	0	0	0	0	0	13	13
04:15 PM	1	8	0	0	9	1	0	0	0	1	0	6	2	0	8	0	0	0	0	0	0	18	18
04:30 PM	0	6	0	0	6	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	13	13
04:45 PM	0	4	0	0	4	0	0	0	0	0	0	3	2	0	5	0	0	0	0	0	0	9	9
Total	1	23	0	0	24	1	0	0	0	1	0	21	7	0	28	0	0	0	0	0	0	53	53
05:00 PM	0	5	0	0	5	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	0	10	10
05:15 PM	0	9	0	0	9	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	14	14
05:30 PM	1	3	0	0	4	0	0	0	0	0	0	6	1	0	7	0	0	0	0	0	0	11	11
05:45 PM	1	2	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	8	8
Total	2	19	0	0	21	1	0	0	0	1	0	20	1	0	21	0	0	0	0	0	0	43	43
Grand Total	3	42	0	0	45	2	0	0	0	2	0	41	8	0	49	0	0	0	0	0	0	96	96
Apprch %	6.7	93.3	0			100	0	0			0	83.7	16.3			0	0	0					
Total %	3.1	43.8	0		46.9	2.1	0	0		2.1	0	42.7	8.3		51	0	0	0		0	0	100	

	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	6	0	6	0	0	0	0	0	**7**	0	**7**	0	0	0	0	13
04:45 PM	0	4	0	4	0	0	0	0	0	3	**2**	5	0	0	0	0	9
05:00 PM	0	5	0	5	**1**	0	0	**1**	0	4	0	4	0	0	0	0	10
05:15 PM	0	**9**	0	**9**	0	0	0	0	0	5	0	5	0	0	0	0	**14**
Total Volume	0	24	0	24	1	0	0	1	0	19	2	21	0	0	0	0	46
% App. Total	0	100	0		100	0	0		0	90.5	9.5		0	0	0		
PHF	.000	.667	.000	.667	.250	.000	.000	.250	.000	.679	.250	.750	.000	.000	.000	.000	.821

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City of Rialto
N/S: Cedar Avenue
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File Name : 04_RLT_CE_Merrill PM
Site Code : 05121547
Start Date : 10/7/2021
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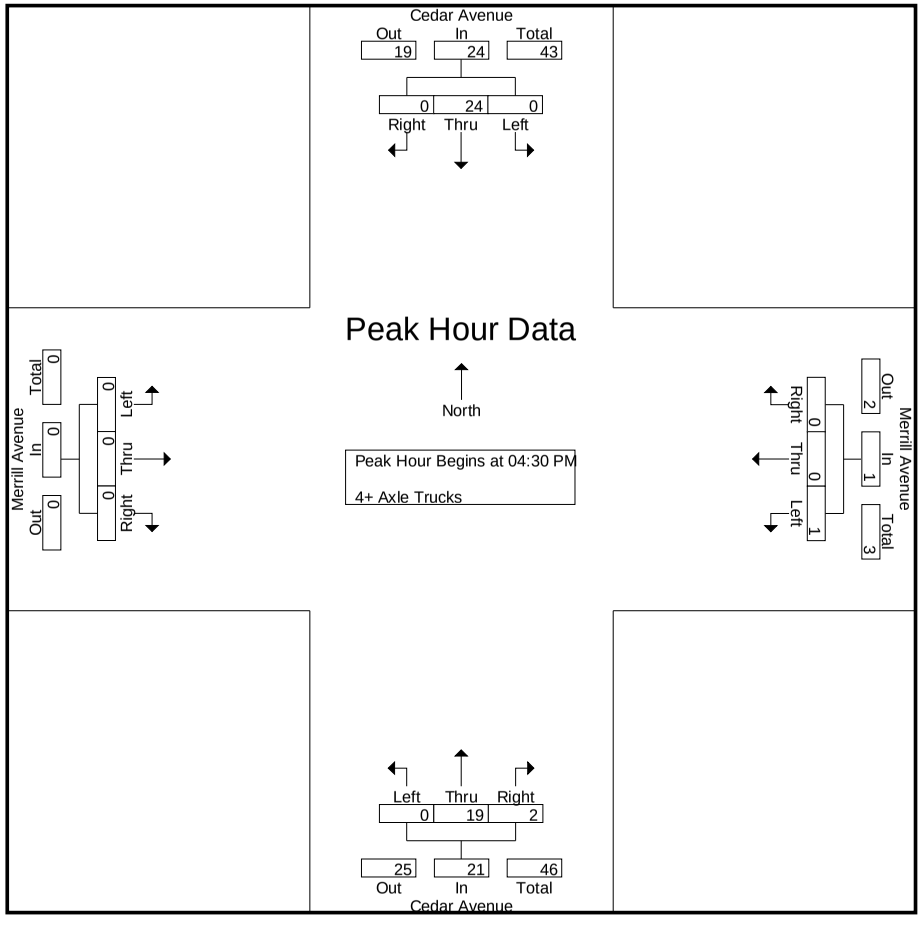

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City of Rialto
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File Name : 04_RLT_CE_Merrill PM
Site Code : 05121547
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Page No : 3

	Cedar Avenue Southbound				Merrill Avenue Westbound				Cedar Avenue Northbound				Merrill Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	6	0	6	0	0	0	0	0	**7**	0	**7**	0	0	0	0	
+15 mins.	0	4	0	4	0	0	0	0	0	3	**2**	5	0	0	0	0	
+30 mins.	0	5	0	5	**1**	0	0	**1**	0	4	0	4	0	0	0	0	
+45 mins.	0	**9**	0	**9**	0	0	0	0	0	5	0	5	0	0	0	0	
Total Volume	0	24	0	24	1	0	0	1	0	19	2	21	0	0	0	0	
% App. Total	0	100	0		100	0	0		0	90.5	9.5		0	0	0		
PHF	.000	.667	.000	.667	.250	.000	.000	.250	.000	.679	.250	.750	.000	.000	.000	.000	

Location: Rialto
N/S: Cedar Avenue
E/W: Merrill Avenue

Date: 10/7/2021
Day: Thursday

PEDESTRIANS

	North Leg Cedar Avenue	East Leg Merrill Avenue	South Leg Cedar Avenue	West Leg Merrill Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	1	0	0	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	1	0	1
7:45 AM	2	3	0	0	5
8:00 AM	0	0	0	0	0
8:15 AM	0	2	2	0	4
8:30 AM	0	0	0	0	0
8:45 AM	2	2	0	0	4
TOTAL VOLUMES:	4	8	3	0	15

	North Leg Cedar Avenue	East Leg Merrill Avenue	South Leg Cedar Avenue	West Leg Merrill Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	1	1	0	1	3
4:15 PM	0	1	0	0	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	2	0	0	2
5:15 PM	0	0	0	0	0
5:30 PM	2	0	0	0	2
5:45 PM	0	3	0	0	3
TOTAL VOLUMES:	3	7	0	1	11

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Location: Rialto
N/S: Cedar Avenue
E/W: Merrill Avenue

Date: 10/7/2021
Day: Thursday

BICYCLES

	Southbound Cedar Avenue			Westbound Merrill Avenue			Northbound Cedar Avenue			Eastbound Merrill Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	0	1

	Southbound Cedar Avenue			Westbound Merrill Avenue			Northbound Cedar Avenue			Eastbound Merrill Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:00 PM	1	0	0	0	0	0	0	1	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	2	0	0	1	0	0	1	0	5

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City of Rialto
N/S: Cedar Avenue
E/W: Valley Boulevard
Weather: Clear

File Name : 05_RLT_CE_Valley AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Cedar Avenue Southbound					Valley Boulevard Westbound					Cedar Avenue Northbound					Valley Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	5	254	8	1	267	75	46	4	2	125	61	221	46	25	328	14	18	121	48	153	76	873	949
07:15 AM	14	285	3	0	302	65	42	5	2	112	81	232	61	22	374	6	26	126	50	158	74	946	1020
07:30 AM	8	280	6	0	294	80	61	8	2	149	81	228	56	19	365	19	43	115	47	177	68	985	1053
07:45 AM	11	251	3	0	265	91	84	13	5	188	87	246	72	15	405	14	60	101	36	175	56	1033	1089
Total	38	1070	20	1	1128	311	233	30	11	574	310	927	235	81	1472	53	147	463	181	663	274	3837	4111
08:00 AM	17	278	14	1	309	70	61	10	1	141	81	159	49	9	289	9	34	88	20	131	31	870	901
08:15 AM	7	243	13	0	263	62	45	9	2	116	91	205	34	4	330	18	19	95	30	132	36	841	877
08:30 AM	16	257	17	3	290	61	46	6	1	113	55	193	34	11	282	18	35	76	30	129	45	814	859
08:45 AM	15	207	10	3	232	74	35	9	2	118	58	162	54	26	274	15	44	92	26	151	57	775	832
Total	55	985	54	7	1094	267	187	34	6	488	285	719	171	50	1175	60	132	351	106	543	169	3300	3469
Grand Total	93	2055	74	8	2222	578	420	64	17	1062	595	1646	406	131	2647	113	279	814	287	1206	443	7137	7580
Apprch %	4.2	92.5	3.3			54.4	39.5	6			22.5	62.2	15.3			9.4	23.1	67.5					
Total %	1.3	28.8	1		31.1	8.1	5.9	0.9		14.9	8.3	23.1	5.7		37.1	1.6	3.9	11.4		16.9	5.8	94.2	
Passenger Vehicles	85	1937	69		2099	548	405	56		1025	566	1530	377		2599	108	264	762		1402	0	0	7125
% Passenger Vehicles	91.4	94.3	93.2	100	94.1	94.8	96.4	87.5	94.1	95	95.1	93	92.9	96.2	93.6	95.6	94.6	93.6	93.4	93.9	0	0	94
Large 2 Axle Vehicles	2	39	1		42	12	6	4		23	16	47	10		75	2	10	28		48	0	0	188
% Large 2 Axle Vehicles	2.2	1.9	1.4	0	1.9	2.1	1.4	6.2	5.9	2.1	2.7	2.9	2.5	1.5	2.7	1.8	3.6	3.4	2.8	3.2	0	0	2.5
3 Axle Vehicles	4	19	0		23	5	3	0		8	5	18	7		31	2	2	6		12	0	0	74
% 3 Axle Vehicles	4.3	0.9	0	0	1	0.9	0.7	0	0	0.7	0.8	1.1	1.7	0.8	1.1	1.8	0.7	0.7	0.7	0.8	0	0	1
4+ Axle Trucks	2	60	4		66	13	6	4		23	8	51	12		73	1	3	18		31	0	0	193
% 4+ Axle Trucks	2.2	2.9	5.4	0	3	2.2	1.4	6.2	0	2.1	1.3	3.1	3	1.5	2.6	0.9	1.1	2.2	3.1	2.1	0	0	2.5

	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	5	254	**8**	267	75	46	4	125	61	221	46	328	14	18	121	153	873
07:15 AM	**14**	**285**	3	**302**	65	42	5	112	81	232	61	374	6	26	**126**	158	946
07:30 AM	8	280	6	294	80	61	8	149	81	228	56	365	**19**	43	115	**177**	985
07:45 AM	11	251	3	265	**91**	**84**	**13**	**188**	**87**	**246**	**72**	**405**	14	**60**	101	175	**1033**
Total Volume	38	1070	20	1128	311	233	30	574	310	927	235	1472	53	147	463	663	3837
% App. Total	3.4	94.9	1.8		54.2	40.6	5.2		21.1	63	16		8	22.2	69.8		
PHF	.679	.939	.625	.934	.854	.693	.577	.763	.891	.942	.816	.909	.697	.613	.919	.936	.929

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City of Rialto
N/S: Cedar Avenue
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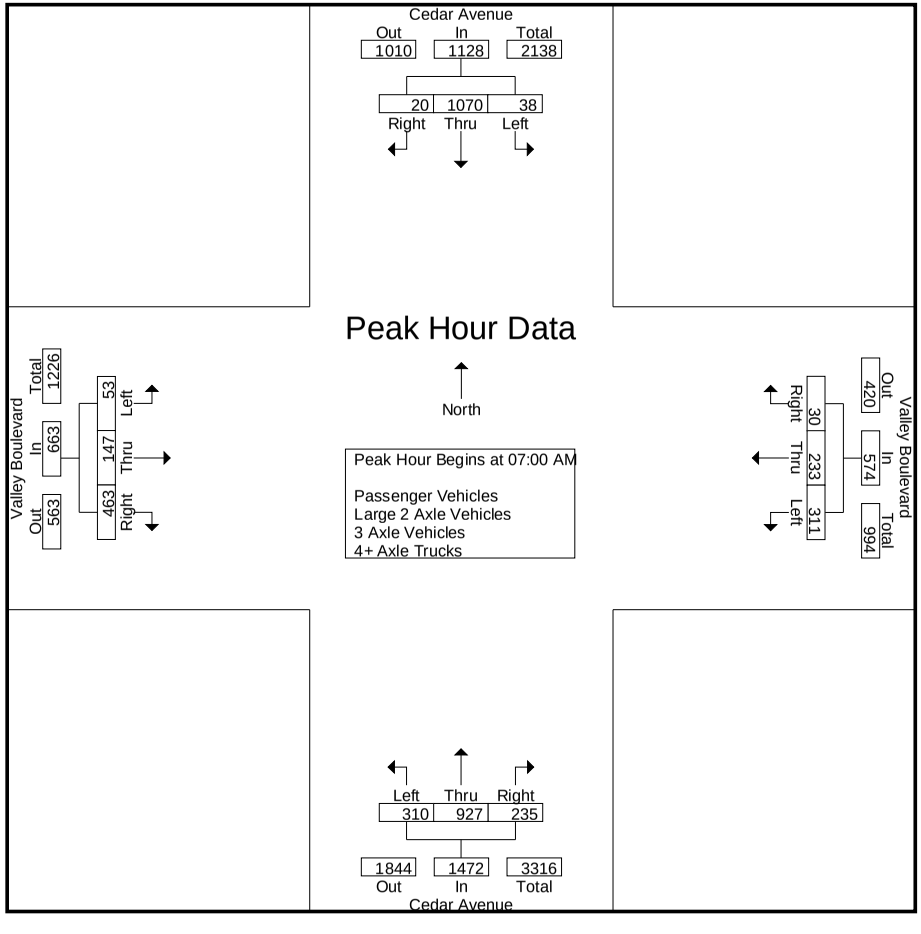

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Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:30 AM				07:00 AM				07:00 AM				
+0 mins.	14	**285**	3	302	80	61	8	149	61	221	46	328	14	18	121	153	
+15 mins.	8	280	6	294	**91**	**84**	**13**	**188**	81	232	61	374	6	26	**126**	158	
+30 mins.	11	251	3	265	70	61	10	141	81	228	56	365	**19**	43	115	**177**	
+45 mins.	**17**	278	**14**	**309**	62	45	9	116	**87**	**246**	**72**	**405**	14	**60**	101	175	
Total Volume	50	1094	26	1170	303	251	40	594	310	927	235	1472	53	147	463	663	
% App. Total	4.3	93.5	2.2		51	42.3	6.7		21.1	63	16		8	22.2	69.8		
PHF	.735	.960	.464	.947	.832	.747	.769	.790	.891	.942	.816	.909	.697	.613	.919	.936	

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Site Code : 05121547
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Page No : 1

Groups Printed- Passenger Vehicles

	Cedar Avenue Southbound					Valley Boulevard Westbound					Cedar Avenue Northbound					Valley Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	245	7	1	255	72	44	4	2	120	59	203	42	24	304	12	18	119	48	149	75	828	903
07:15 AM	12	267	2	0	281	61	40	5	2	106	75	216	58	22	349	6	24	120	47	150	71	886	957
07:30 AM	7	269	6	0	282	74	61	6	1	141	79	213	55	19	347	19	42	108	42	169	62	939	1001
07:45 AM	10	243	3	0	256	90	83	12	5	185	84	232	68	14	384	13	56	90	33	159	52	984	1036
Total	32	1024	18	1	1074	297	228	27	10	552	297	864	223	79	1384	50	140	437	170	627	260	3637	3897
08:00 AM	16	261	12	1	289	67	60	8	1	135	76	144	42	9	262	9	32	83	17	124	28	810	838
08:15 AM	6	227	12	0	245	59	43	8	2	110	87	190	31	4	308	16	17	90	29	123	35	786	821
08:30 AM	16	239	17	3	272	58	41	6	1	105	49	180	29	9	258	18	33	74	29	125	42	760	802
08:45 AM	15	186	10	3	211	67	33	7	2	107	57	152	52	25	261	15	42	78	23	135	53	714	767
Total	53	913	51	7	1017	251	177	29	6	457	269	666	154	47	1089	58	124	325	98	507	158	3070	3228
Grand Total	85	1937	69	8	2091	548	405	56	16	1009	566	1530	377	126	2473	108	264	762	268	1134	418	6707	7125
Apprch %	4.1	92.6	3.3			54.3	40.1	5.6			22.9	61.9	15.2			9.5	23.3	67.2					
Total %	1.3	28.9	1		31.2	8.2	6	0.8		15	8.4	22.8	5.6		36.9	1.6	3.9	11.4		16.9	5.9	94.1	

	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	245	**7**	255	72	44	4	120	59	203	42	304	12	18	119	149	828
07:15 AM	**12**	267	2	281	61	40	5	106	75	216	58	349	6	24	**120**	150	886
07:30 AM	7	**269**	6	**282**	74	61	6	141	79	213	55	347	**19**	42	108	**169**	939
07:45 AM	10	243	3	256	**90**	**83**	**12**	**185**	**84**	**232**	**68**	**384**	13	**56**	90	159	**984**
Total Volume	32	1024	18	1074	297	228	27	552	297	864	223	1384	50	140	437	627	3637
% App. Total	3	95.3	1.7		53.8	41.3	4.9		21.5	62.4	16.1		8	22.3	69.7		
PHF	.667	.952	.643	.952	.825	.687	.563	.746	.884	.931	.820	.901	.658	.625	.910	.928	.924

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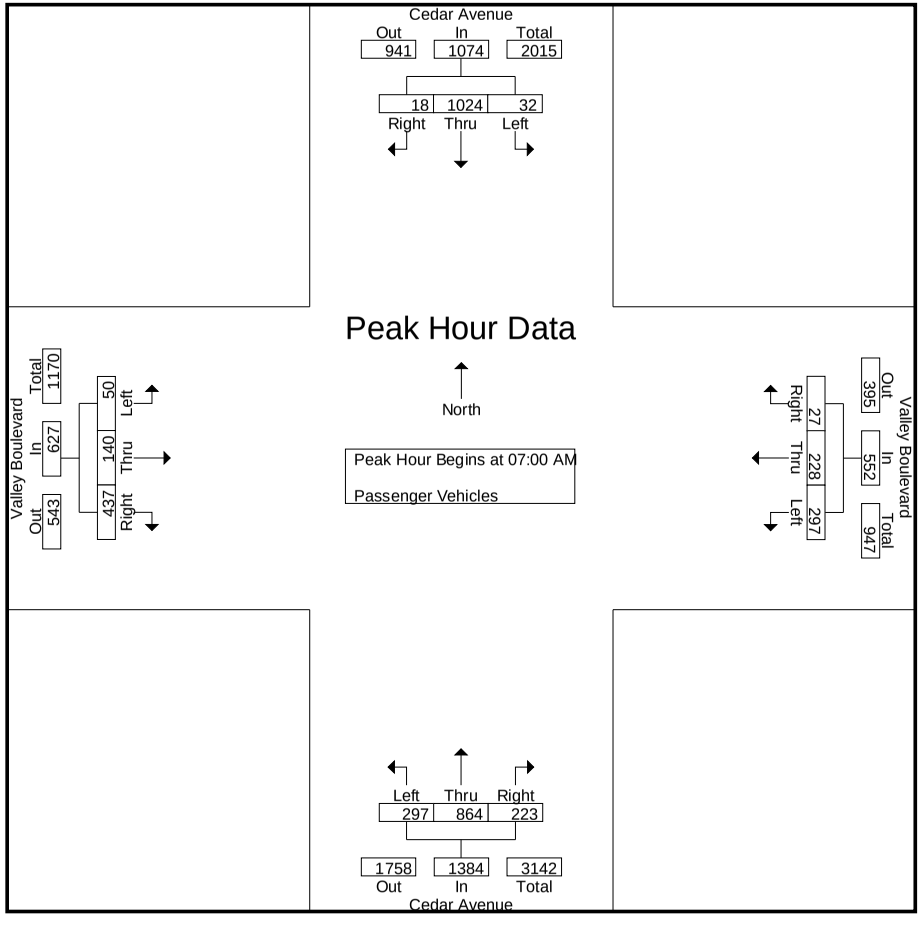
City of Rialto
N/S: Cedar Avenue
E/W: Valley Boulevard
Weather: Clear

File Name : 05_RLT_CE_Valley AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
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Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	3	245	**7**	255	72	44	4	120	59	203	42	304	12	18	119	149	
+15 mins.	**12**	267	2	281	61	40	5	106	75	216	58	349	6	24	**120**	150	
+30 mins.	7	**269**	6	**282**	74	61	6	141	79	213	55	347	**19**	42	108	**169**	
+45 mins.	10	243	3	256	**90**	**83**	**12**	**185**	**84**	**232**	**68**	**384**	13	**56**	90	159	
Total Volume	32	1024	18	1074	297	228	27	552	297	864	223	1384	50	140	437	627	
% App. Total	3	95.3	1.7		53.8	41.3	4.9		21.5	62.4	16.1		8	22.3	69.7		
PHF	.667	.952	.643	.952	.825	.687	.563	.746	.884	.931	.820	.901	.658	.625	.910	.928	

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City of Rialto
N/S: Cedar Avenue
E/W: Valley Boulevard
Weather: Clear

File Name : 05_RLT_CE_Valley AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Cedar Avenue Southbound					Valley Boulevard Westbound					Cedar Avenue Northbound					Valley Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	6	0	0	7	1	2	0	0	3	0	6	0	0	6	0	0	1	0	1	0	17	17
07:15 AM	0	3	1	0	4	2	0	0	0	2	4	8	1	0	13	0	1	3	1	4	1	23	24
07:30 AM	0	0	0	0	0	3	0	1	1	4	0	6	1	0	7	0	0	3	2	3	3	14	17
07:45 AM	0	3	0	0	3	0	0	1	0	1	0	8	2	1	10	0	4	5	0	9	1	23	24
Total	1	12	1	0	14	6	2	2	1	10	4	28	4	1	36	0	5	12	3	17	5	77	82
08:00 AM	1	5	0	0	6	1	1	1	0	3	5	6	3	0	14	0	0	3	1	3	1	26	27
08:15 AM	0	6	0	0	6	2	0	1	0	3	2	4	1	0	7	2	2	3	1	7	1	23	24
08:30 AM	0	8	0	0	8	0	3	0	0	3	4	5	1	0	10	0	1	1	0	2	0	23	23
08:45 AM	0	8	0	0	8	3	0	0	0	3	1	4	1	1	6	0	2	9	3	11	4	28	32
Total	1	27	0	0	28	6	4	2	0	12	12	19	6	1	37	2	5	16	5	23	6	100	106
Grand Total	2	39	1	0	42	12	6	4	1	22	16	47	10	2	73	2	10	28	8	40	11	177	188
Apprch %	4.8	92.9	2.4			54.5	27.3	18.2			21.9	64.4	13.7			5	25	70					
Total %	1.1	22	0.6		23.7	6.8	3.4	2.3		12.4	9	26.6	5.6		41.2	1.1	5.6	15.8		22.6	5.9	94.1	

	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**1**	**6**	0	**7**	1	**2**	0	3	0	6	0	6	0	0	1	1	17
07:15 AM	0	3	**1**	4	2	0	0	2	**4**	**8**	1	**13**	0	1	3	4	**23**
07:30 AM	0	0	0	0	**3**	0	**1**	**4**	0	6	1	7	0	0	3	3	14
07:45 AM	0	3	0	3	0	0	1	1	0	8	**2**	10	0	**4**	**5**	**9**	23
Total Volume	1	12	1	14	6	2	2	10	4	28	4	36	0	5	12	17	77
% App. Total	7.1	85.7	7.1		60	20	20		11.1	77.8	11.1		0	29.4	70.6		
PHF	.250	.500	.250	.500	.500	.250	.500	.625	.250	.875	.500	.692	.000	.313	.600	.472	.837

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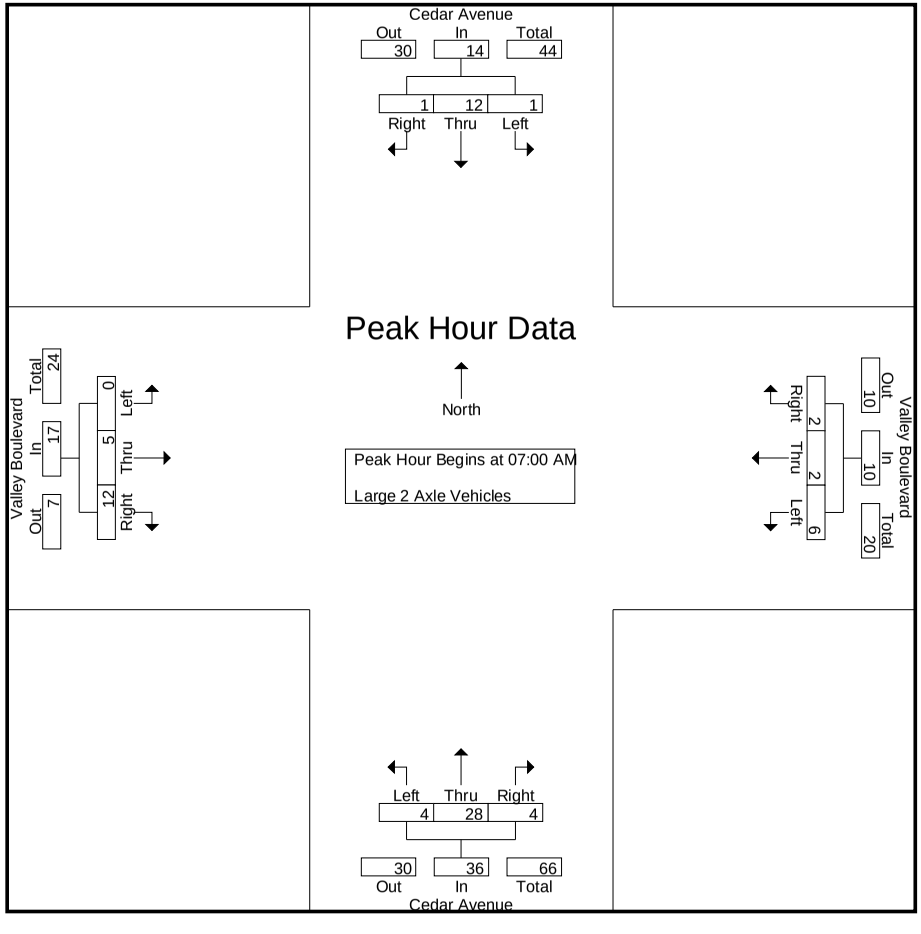
City of Rialto
N/S: Cedar Avenue
E/W: Valley Boulevard
Weather: Clear

File Name : 05_RLT_CE_Valley AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
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File Name : 05_RLT_CE_Valley AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	**1**	**6**	0	**7**	1	**2**	0	3	0	6	0	6	0	0	1	1	
+15 mins.	0	3	**1**	4	2	0	0	2	**4**	**8**	1	**13**	0	1	3	4	
+30 mins.	0	0	0	0	**3**	0	**1**	**4**	0	6	1	7	0	0	3	3	
+45 mins.	0	3	0	3	0	0	1	1	0	8	**2**	10	0	**4**	**5**	**9**	
Total Volume	1	12	1	14	6	2	2	10	4	28	4	36	0	5	12	17	
% App. Total	7.1	85.7	7.1		60	20	20		11.1	77.8	11.1		0	29.4	70.6		
PHF	.250	.500	.250	.500	.500	.250	.500	.625	.250	.875	.500	.692	.000	.313	.600	.472	

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City of Rialto
N/S: Cedar Avenue
E/W: Valley Boulevard
Weather: Clear

File Name : 05_RLT_CE_Valley AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

	Cedar Avenue Southbound					Valley Boulevard Westbound					Cedar Avenue Northbound					Valley Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	2	0	0	3	1	0	0	0	1	0	2	3	1	5	2	0	0	0	2	1	11	12
07:15 AM	2	5	0	0	7	0	2	0	0	2	1	2	0	0	3	0	0	1	1	1	1	13	14
07:30 AM	0	0	0	0	0	1	0	0	0	1	1	4	0	0	5	0	1	0	0	1	0	7	7
07:45 AM	1	1	0	0	2	1	0	0	0	1	1	2	1	0	4	0	0	1	0	1	0	8	8
Total	4	8	0	0	12	3	2	0	0	5	3	10	4	1	17	2	1	2	1	5	2	39	41
08:00 AM	0	5	0	0	5	1	0	0	0	1	0	2	2	0	4	0	1	0	0	1	0	11	11
08:15 AM	0	2	0	0	2	0	0	0	0	0	1	2	1	0	4	0	0	1	0	1	0	7	7
08:30 AM	0	0	0	0	0	0	1	0	0	1	1	2	0	0	3	0	0	1	1	1	1	5	6
08:45 AM	0	4	0	0	4	1	0	0	0	1	0	2	0	0	2	0	0	2	0	2	0	9	9
Total	0	11	0	0	11	2	1	0	0	3	2	8	3	0	13	0	1	4	1	5	1	32	33
Grand Total	4	19	0	0	23	5	3	0	0	8	5	18	7	1	30	2	2	6	2	10	3	71	74
Apprch %	17.4	82.6	0			62.5	37.5	0			16.7	60	23.3			20	20	60					
Total %	5.6	26.8	0		32.4	7	4.2	0		11.3	7	25.4	9.9		42.3	2.8	2.8	8.5		14.1	4.1	95.9	

	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	2	0	3	**1**	0	0	1	0	2	**3**	**5**	**2**	0	0	**2**	11
07:15 AM	**2**	**5**	0	**7**	0	**2**	0	**2**	**1**	2	0	3	0	0	**1**	1	**13**
07:30 AM	0	0	0	0	1	0	0	1	1	**4**	0	5	0	**1**	0	1	7
07:45 AM	1	1	0	2	1	0	0	1	1	2	1	4	0	0	1	1	8
Total Volume	4	8	0	12	3	2	0	5	3	10	4	17	2	1	2	5	39
% App. Total	33.3	66.7	0		60	40	0		17.6	58.8	23.5		40	20	40		
PHF	.500	.400	.000	.429	.750	.250	.000	.625	.750	.625	.333	.850	.250	.250	.500	.625	.750

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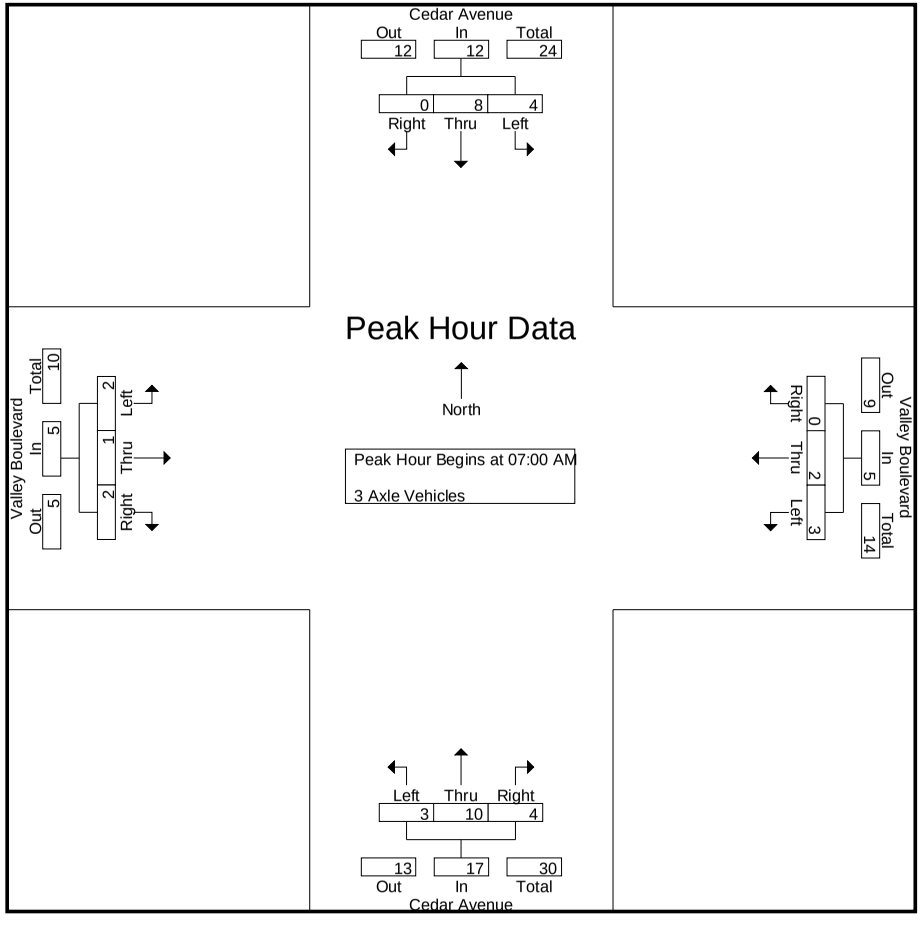
City of Rialto
N/S: Cedar Avenue
E/W: Valley Boulevard
Weather: Clear

File Name : 05_RLT_CE_Valley AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
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File Name : 05_RLT_CE_Valley AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	1	2	0	3	**1**	0	0	1	0	2	**3**	**5**	**2**	0	0	**2**	
+15 mins.	**2**	**5**	0	**7**	0	**2**	0	**2**	**1**	2	0	3	0	0	**1**	1	
+30 mins.	0	0	0	0	1	0	0	1	1	**4**	0	5	0	**1**	0	1	
+45 mins.	1	1	0	2	1	0	0	1	1	2	1	4	0	0	1	1	
Total Volume	4	8	0	12	3	2	0	5	3	10	4	17	2	1	2	5	
% App. Total	33.3	66.7	0		60	40	0		17.6	58.8	23.5		40	20	40		
PHF	.500	.400	.000	.429	.750	.250	.000	.625	.750	.625	.333	.850	.250	.250	.500	.625	

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City of Rialto
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File Name : 05_RLT_CE_Valley AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

	Cedar Avenue Southbound					Valley Boulevard Westbound					Cedar Avenue Northbound					Valley Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	1	1	0	2	1	0	0	0	1	2	10	1	0	13	0	0	1	0	1	0	17	17
07:15 AM	0	10	0	0	10	2	0	0	0	2	1	6	2	0	9	0	1	2	1	3	1	24	25
07:30 AM	1	11	0	0	12	2	0	1	0	3	1	5	0	0	6	0	0	4	3	4	3	25	28
07:45 AM	0	4	0	0	4	0	1	0	0	1	2	4	1	0	7	1	0	5	3	6	3	18	21
Total	1	26	1	0	28	5	1	1	0	7	6	25	4	0	35	1	1	12	7	14	7	84	91
08:00 AM	0	7	2	0	9	1	0	1	0	2	0	7	2	0	9	0	1	2	2	3	2	23	25
08:15 AM	1	8	1	0	10	1	2	0	0	3	1	9	1	0	11	0	0	1	0	1	0	25	25
08:30 AM	0	10	0	0	10	3	1	0	0	4	1	6	4	2	11	0	1	0	0	1	2	26	28
08:45 AM	0	9	0	0	9	3	2	2	0	7	0	4	1	0	5	0	0	3	0	3	0	24	24
Total	1	34	3	0	38	8	5	3	0	16	2	26	8	2	36	0	2	6	2	8	4	98	102
Grand Total	2	60	4	0	66	13	6	4	0	23	8	51	12	2	71	1	3	18	9	22	11	182	193
Apprch %	3	90.9	6.1			56.5	26.1	17.4			11.3	71.8	16.9			4.5	13.6	81.8					
Total %	1.1	33	2.2		36.3	7.1	3.3	2.2		12.6	4.4	28	6.6		39	0.5	1.6	9.9		12.1	5.7	94.3	

	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	**1**	2	1	0	0	1	**2**	**10**	1	**13**	0	0	1	1	17
07:15 AM	0	10	0	10	**2**	0	0	2	1	6	**2**	9	0	**1**	2	3	24
07:30 AM	**1**	**11**	0	**12**	2	0	**1**	**3**	1	5	0	6	0	0	4	4	**25**
07:45 AM	0	4	0	4	0	**1**	0	1	2	4	1	7	**1**	0	**5**	**6**	18
Total Volume	1	26	1	28	5	1	1	7	6	25	4	35	1	1	12	14	84
% App. Total	3.6	92.9	3.6		71.4	14.3	14.3		17.1	71.4	11.4		7.1	7.1	85.7		
PHF	.250	.591	.250	.583	.625	.250	.250	.583	.750	.625	.500	.673	.250	.250	.600	.583	.840

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City of Rialto
N/S: Cedar Avenue
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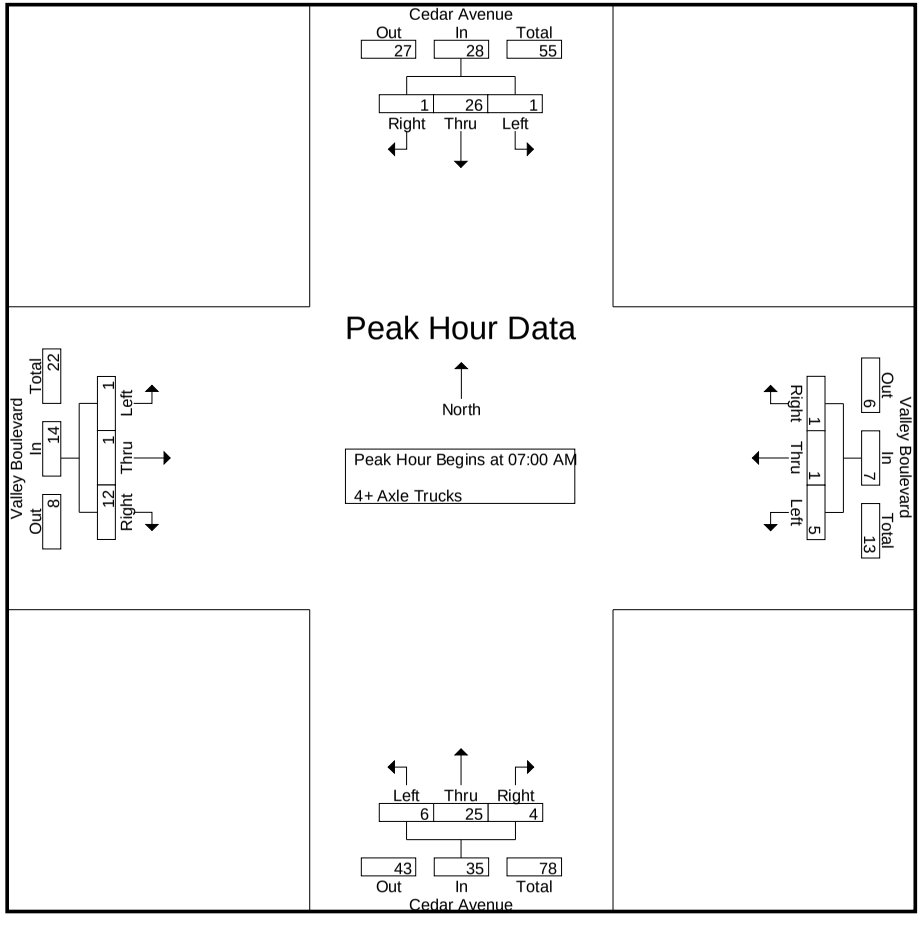
Weather: Clear

File Name : 05_RLT_CE_Valley AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
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Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	1	**1**	2	1	0	0	1	**2**	**10**	1	**13**	0	0	1	1	
+15 mins.	0	10	0	10	**2**	0	0	2	1	6	**2**	9	0	**1**	2	3	
+30 mins.	**1**	**11**	0	**12**	2	0	**1**	**3**	1	5	0	6	0	0	4	4	
+45 mins.	0	4	0	4	0	**1**	0	1	2	4	1	7	**1**	0	**5**	**6**	
Total Volume	1	26	1	28	5	1	1	7	6	25	4	35	1	1	12	14	
% App. Total	3.6	92.9	3.6		71.4	14.3	14.3		17.1	71.4	11.4		7.1	7.1	85.7		
PHF	.250	.591	.250	.583	.625	.250	.250	.583	.750	.625	.500	.673	.250	.250	.600	.583	

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City of Rialto
N/S: Cedar Avenue
E/W: Valley Boulevard
Weather: Clear

File Name : 05_RLT_CE_Valley PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Cedar Avenue Southbound					Valley Boulevard Westbound					Cedar Avenue Northbound					Valley Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	9	187	25	1	221	62	60	13	3	135	93	302	48	18	443	55	101	107	29	263	51	1062	1113
04:15 PM	24	247	16	3	287	64	54	16	3	134	79	255	60	24	394	60	87	105	32	252	62	1067	1129
04:30 PM	21	236	15	1	272	63	69	14	2	146	97	263	50	22	410	75	98	116	33	289	58	1117	1175
04:45 PM	22	214	15	1	251	53	58	18	4	129	78	253	43	12	374	68	105	128	51	301	68	1055	1123
Total	76	884	71	6	1031	242	241	61	12	544	347	1073	201	76	1621	258	391	456	145	1105	239	4301	4540
05:00 PM	16	180	17	3	213	64	63	17	4	144	83	268	56	27	407	63	77	139	36	279	70	1043	1113
05:15 PM	18	242	19	4	279	50	56	10	5	116	74	280	51	16	405	61	85	118	35	264	60	1064	1124
05:30 PM	25	209	6	1	240	70	50	11	3	131	66	255	44	17	365	56	75	101	34	232	55	968	1023
05:45 PM	22	221	10	0	253	50	52	16	3	118	71	282	54	25	407	60	75	97	23	232	51	1010	1061
Total	81	852	52	8	985	234	221	54	15	509	294	1085	205	85	1584	240	312	455	128	1007	236	4085	4321
Grand Total	157	1736	123	14	2016	476	462	115	27	1053	641	2158	406	161	3205	498	703	911	273	2112	475	8386	8861
Apprch %	7.8	86.1	6.1			45.2	43.9	10.9			20	67.3	12.7			23.6	33.3	43.1					
Total %	1.9	20.7	1.5		24	5.7	5.5	1.4		12.6	7.6	25.7	4.8		38.2	5.9	8.4	10.9		25.2	5.4	94.6	
Passenger Vehicles	144	1629	115		1900	461	450	105		1040	607	2081	392		3238	491	681	884		2323	0	0	8501
% Passenger Vehicles	91.7	93.8	93.5	85.7	93.6	96.8	97.4	91.3	88.9	96.3	94.7	96.4	96.6	98.1	96.2	98.6	96.9	97	97.8	97.4	0	0	95.9
Large 2 Axle Vehicles	5	37	0		42	8	6	1		15	12	24	8		47	2	10	19		35	0	0	139
% Large 2 Axle Vehicles	3.2	2.1	0	0	2.1	1.7	1.3	0.9	0	1.4	1.9	1.1	2	1.9	1.4	0.4	1.4	2.1	1.5	1.5	0	0	1.6
3 Axle Vehicles	1	27	4		33	4	0	5		11	7	13	1		21	3	6	2		12	0	0	77
% 3 Axle Vehicles	0.6	1.6	3.3	7.1	1.6	0.8	0	4.3	7.4	1	1.1	0.6	0.2	0	0.6	0.6	0.9	0.2	0.4	0.5	0	0	0.9
4+ Axle Trucks	7	43	4		55	3	6	4		14	15	40	5		60	2	6	6		15	0	0	144
% 4+ Axle Trucks	4.5	2.5	3.3	7.1	2.7	0.6	1.3	3.5	3.7	1.3	2.3	1.9	1.2	0	1.8	0.4	0.9	0.7	0.4	0.6	0	0	1.6

	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	9	187	**25**	221	62	60	13	135	93	**302**	48	**443**	55	101	107	263	1062
04:15 PM	**24**	**247**	16	**287**	**64**	54	16	134	79	255	**60**	394	60	87	105	252	1067
04:30 PM	21	236	15	272	63	**69**	14	**146**	**97**	263	50	410	**75**	98	116	289	**1117**
04:45 PM	22	214	15	251	53	58	**18**	129	78	253	43	374	68	**105**	**128**	**301**	1055
Total Volume	76	884	71	1031	242	241	61	544	347	1073	201	1621	258	391	456	1105	4301
% App. Total	7.4	85.7	6.9		44.5	44.3	11.2		21.4	66.2	12.4		23.3	35.4	41.3		
PHF	.792	.895	.710	.898	.945	.873	.847	.932	.894	.888	.838	.915	.860	.931	.891	.918	.963

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City of Rialto
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E/W: Valley Boulevard
Weather: Clear

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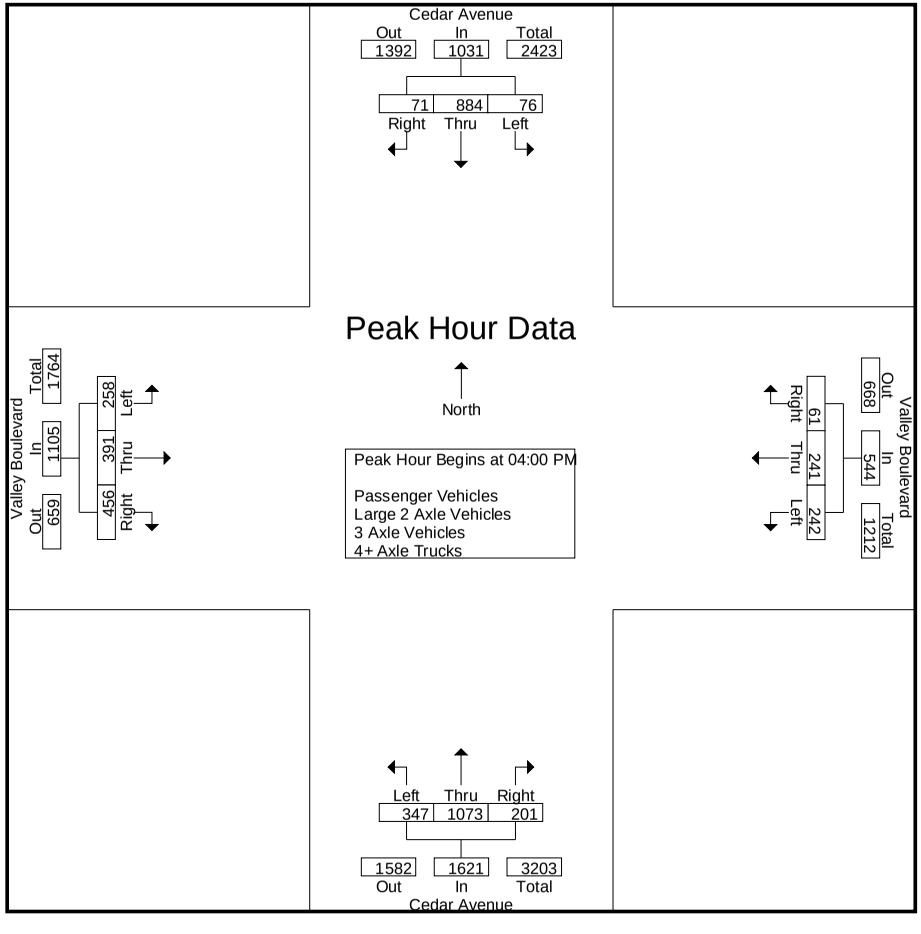
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:15 PM				04:00 PM				04:30 PM				
+0 mins.	9	187	**25**	221	**64**	54	16	134	93	**302**	48	**443**	**75**	98	116	289	
+15 mins.	**24**	**247**	16	**287**	63	**69**	14	**146**	79	255	**60**	394	68	**105**	128	**301**	
+30 mins.	21	236	15	272	53	58	**18**	129	**97**	263	50	410	63	77	**139**	279	
+45 mins.	22	214	15	251	64	63	17	144	78	253	43	374	61	85	118	264	
Total Volume	76	884	71	1031	244	244	65	553	347	1073	201	1621	267	365	501	1133	
% App. Total	7.4	85.7	6.9		44.1	44.1	11.8		21.4	66.2	12.4		23.6	32.2	44.2		
PHF	.792	.895	.710	.898	.953	.884	.903	.947	.894	.888	.838	.915	.890	.869	.901	.941	

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Groups Printed- Passenger Vehicles

	Cedar Avenue Southbound					Valley Boulevard Westbound					Cedar Avenue Northbound					Valley Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	8	171	22	1	201	60	58	12	2	130	92	291	45	18	428	52	98	104	29	254	50	1013	1063
04:15 PM	19	229	15	2	263	63	54	15	3	132	76	246	59	24	381	58	84	102	32	244	61	1020	1081
04:30 PM	19	220	14	0	253	59	68	12	2	139	91	254	47	20	392	75	96	115	33	286	55	1070	1125
04:45 PM	19	202	15	1	236	53	54	17	3	124	74	246	42	12	362	67	102	126	50	295	66	1017	1083
Total	65	822	66	4	953	235	234	56	10	525	333	1037	193	74	1563	252	380	447	144	1079	232	4120	4352
05:00 PM	16	167	16	3	199	58	63	16	4	137	79	258	54	26	391	63	74	136	34	273	67	1000	1067
05:15 PM	17	226	18	4	261	49	55	9	5	113	71	270	50	16	391	61	81	114	34	256	59	1021	1080
05:30 PM	24	201	6	1	231	69	47	9	2	125	61	245	43	17	349	55	72	94	32	221	52	926	978
05:45 PM	22	213	9	0	244	50	51	15	3	116	63	271	52	25	386	60	74	93	23	227	51	973	1024
Total	79	807	49	8	935	226	216	49	14	491	274	1044	199	84	1517	239	301	437	123	977	229	3920	4149
Grand Total	144	1629	115	12	1888	461	450	105	24	1016	607	2081	392	158	3080	491	681	884	267	2056	461	8040	8501
Apprch %	7.6	86.3	6.1			45.4	44.3	10.3			19.7	67.6	12.7			23.9	33.1	43					
Total %	1.8	20.3	1.4		23.5	5.7	5.6	1.3		12.6	7.5	25.9	4.9		38.3	6.1	8.5	11		25.6	5.4	94.6	

	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	8	171	**22**	201	60	58	12	130	**92**	**291**	45	**428**	52	98	104	254	1013
04:15 PM	**19**	**229**	15	**263**	**63**	54	15	132	76	246	**59**	381	58	84	102	244	1020
04:30 PM	19	220	14	253	59	**68**	12	**139**	91	254	47	392	**75**	96	115	286	**1070**
04:45 PM	19	202	15	236	53	54	**17**	124	74	246	42	362	67	**102**	**126**	**295**	1017
Total Volume	65	822	66	953	235	234	56	525	333	1037	193	1563	252	380	447	1079	4120
% App. Total	6.8	86.3	6.9		44.8	44.6	10.7		21.3	66.3	12.3		23.4	35.2	41.4		
PHF	.855	.897	.750	.906	.933	.860	.824	.944	.905	.891	.818	.913	.840	.931	.887	.914	.963

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City of Rialto
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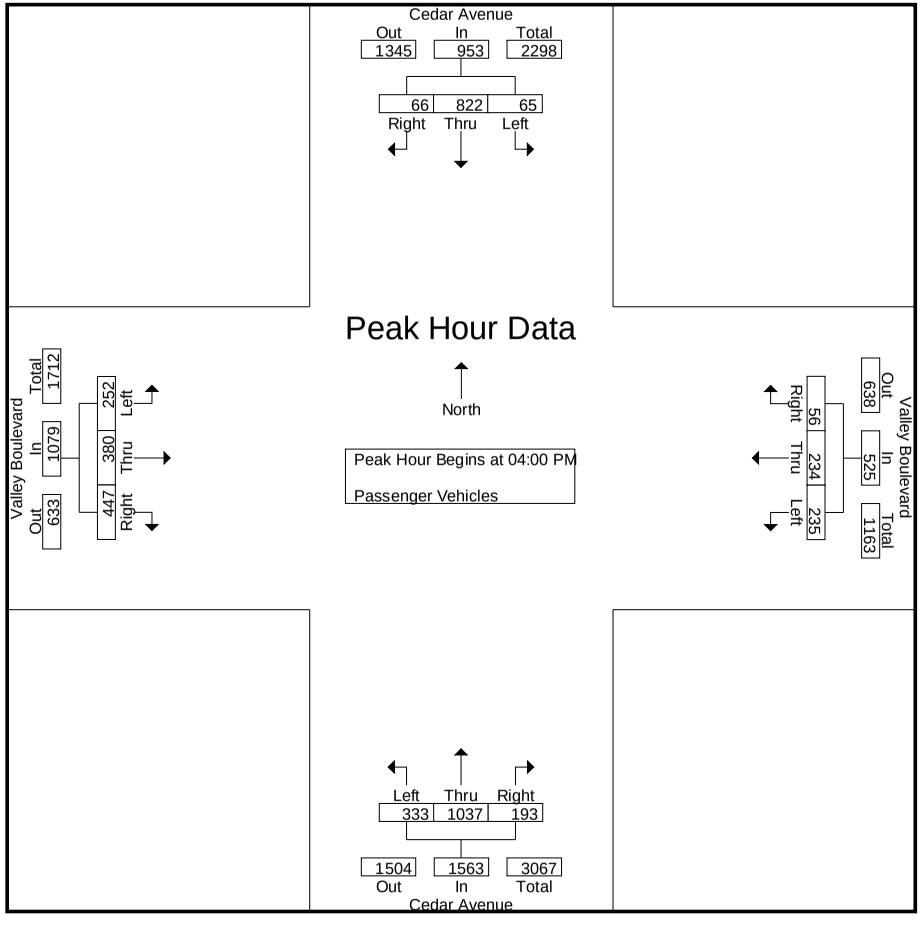
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	8	171	**22**	201	60	58	12	130	**92**	**291**	45	**428**	52	98	104	254	
+15 mins.	**19**	**229**	15	**263**	**63**	54	15	132	76	246	**59**	381	58	84	102	244	
+30 mins.	19	220	14	253	59	**68**	12	**139**	91	254	47	392	**75**	96	115	286	
+45 mins.	19	202	15	236	53	54	**17**	124	74	246	42	362	67	**102**	**126**	**295**	
Total Volume	65	822	66	953	235	234	56	525	333	1037	193	1563	252	380	447	1079	
% App. Total	6.8	86.3	6.9		44.8	44.6	10.7		21.3	66.3	12.3		23.4	35.2	41.4		
PHF	.855	.897	.750	.906	.933	.860	.824	.944	.905	.891	.818	.913	.840	.931	.887	.914	

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Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Cedar Avenue Southbound					Valley Boulevard Westbound					Cedar Avenue Northbound					Valley Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	9	0	0	10	0	2	0	0	2	1	2	0	0	3	0	2	2	0	4	0	19	19
04:15 PM	2	5	0	0	7	1	0	0	0	1	2	3	1	0	6	2	3	3	0	8	0	22	22
04:30 PM	0	4	0	0	4	2	0	0	0	2	1	2	3	2	6	0	1	0	0	1	2	13	15
04:45 PM	1	5	0	0	6	0	1	0	0	1	1	0	0	0	1	0	1	1	1	2	1	10	11
Total	4	23	0	0	27	3	3	0	0	6	5	7	4	2	16	2	7	6	1	15	3	64	67
05:00 PM	0	3	0	0	3	3	0	1	0	4	3	4	2	1	9	0	1	2	1	3	2	19	21
05:15 PM	1	4	0	0	5	1	1	0	0	2	1	5	0	0	6	0	0	2	0	2	0	15	15
05:30 PM	0	3	0	0	3	1	1	0	0	2	2	5	0	0	7	0	2	7	2	9	2	21	23
05:45 PM	0	4	0	0	4	0	1	0	0	1	1	3	2	0	6	0	0	2	0	2	0	13	13
Total	1	14	0	0	15	5	3	1	0	9	7	17	4	1	28	0	3	13	3	16	4	68	72
Grand Total	5	37	0	0	42	8	6	1	0	15	12	24	8	3	44	2	10	19	4	31	7	132	139
Apprch %	11.9	88.1	0			53.3	40	6.7			27.3	54.5	18.2			6.5	32.3	61.3					
Total %	3.8	28	0		31.8	6.1	4.5	0.8		11.4	9.1	18.2	6.1		33.3	1.5	7.6	14.4		23.5	5	95	

	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	1	**9**	0	**10**	0	**2**	0	**2**	1	2	0	3	0	2	2	4	19
04:15 PM	**2**	5	0	7	1	0	0	1	**2**	**3**	1	**6**	**2**	**3**	**3**	**8**	**22**
04:30 PM	0	4	0	4	**2**	0	0	2	1	2	**3**	6	0	1	0	1	13
04:45 PM	1	5	0	6	0	1	0	1	1	0	0	1	0	1	1	2	10
Total Volume	4	23	0	27	3	3	0	6	5	7	4	16	2	7	6	15	64
% App. Total	14.8	85.2	0		50	50	0		31.2	43.8	25		13.3	46.7	40		
PHF	.500	.639	.000	.675	.375	.375	.000	.750	.625	.583	.333	.667	.250	.583	.500	.469	.727

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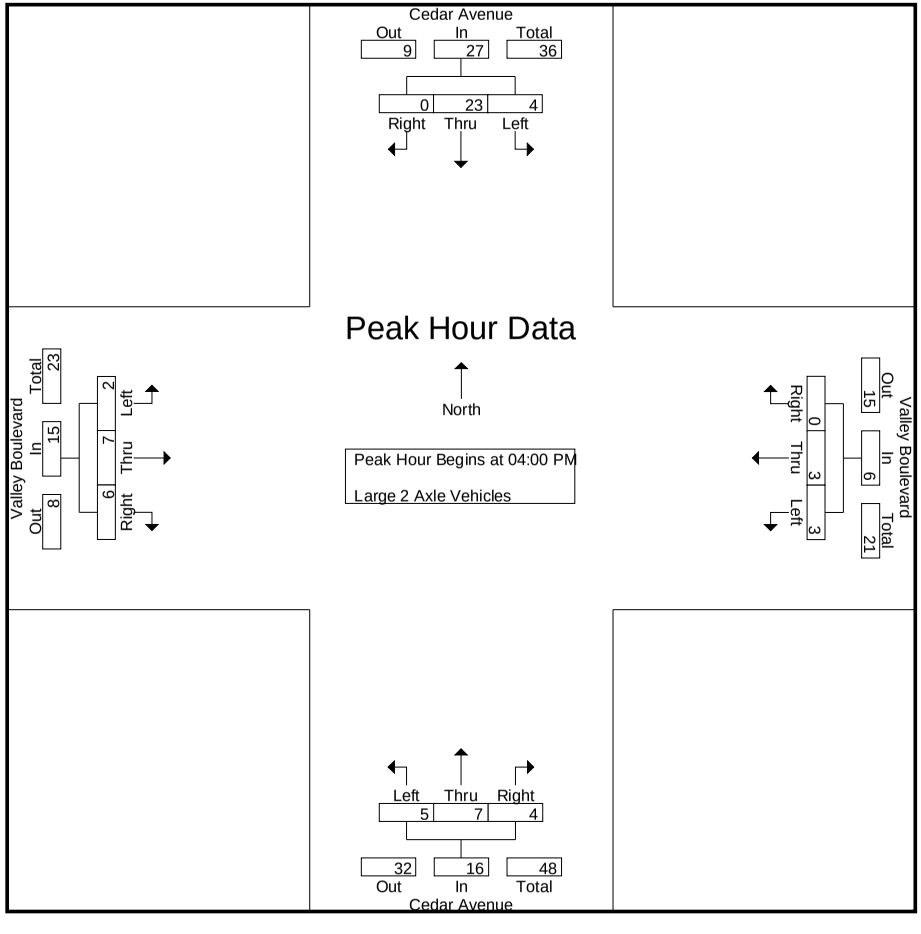

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	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	1	**9**	0	**10**	0	**2**	0	**2**	1	2	0	3	0	2	2	4	
+15 mins.	**2**	5	0	7	1	0	0	1	**2**	**3**	1	**6**	**2**	**3**	**3**	**8**	
+30 mins.	0	4	0	4	**2**	0	0	2	1	2	**3**	6	0	1	0	1	
+45 mins.	1	5	0	6	0	1	0	1	1	0	0	1	0	1	1	2	
Total Volume	4	23	0	27	3	3	0	6	5	7	4	16	2	7	6	15	
% App. Total	14.8	85.2	0		50	50	0		31.2	43.8	25		13.3	46.7	40		
PHF	.500	.639	.000	.675	.375	.375	.000	.750	.625	.583	.333	.667	.250	.583	.500	.469	

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Page No : 1

Groups Printed- 3 Axle Vehicles

	Cedar Avenue Southbound					Valley Boulevard Westbound					Cedar Avenue Northbound					Valley Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	1	2	0	3	2	0	0	0	2	0	2	0	0	2	2	1	0	0	3	0	10	10
04:15 PM	0	5	1	1	6	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	1	8	9
04:30 PM	1	6	0	0	7	1	0	1	0	2	1	2	0	0	3	0	1	1	0	2	0	14	14
04:45 PM	0	3	0	0	3	0	0	1	1	1	1	3	0	0	4	0	1	0	0	1	1	9	10
Total	1	15	3	1	19	3	0	3	1	6	3	7	0	0	10	2	3	1	0	6	2	41	43
05:00 PM	0	4	1	0	5	1	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1	7	8
05:15 PM	0	5	0	0	5	0	0	1	0	1	1	1	1	0	3	0	3	0	0	3	0	12	12
05:30 PM	0	2	0	0	2	0	0	1	1	1	1	2	0	0	3	1	0	0	0	1	1	7	8
05:45 PM	0	1	0	0	1	0	0	0	0	0	2	3	0	0	5	0	0	0	0	0	0	6	6
Total	0	12	1	0	13	1	0	2	1	3	4	6	1	0	11	1	3	1	1	5	2	32	34
Grand Total	1	27	4	1	32	4	0	5	2	9	7	13	1	0	21	3	6	2	1	11	4	73	77
Apprch %	3.1	84.4	12.5			44.4	0	55.6			33.3	61.9	4.8			27.3	54.5	18.2					
Total %	1.4	37	5.5		43.8	5.5	0	6.8		12.3	9.6	17.8	1.4		28.8	4.1	8.2	2.7		15.1	5.2	94.8	

	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	1	**2**	3	**2**	0	0	**2**	0	2	0	2	**2**	**1**	0	**3**	10
04:15 PM	0	5	1	6	0	0	**1**	1	**1**	0	0	1	0	0	0	0	8
04:30 PM	**1**	**6**	0	**7**	1	0	1	2	1	2	0	3	0	1	**1**	2	**14**
04:45 PM	0	3	0	3	0	0	1	1	1	**3**	0	**4**	0	1	0	1	9
Total Volume	1	15	3	19	3	0	3	6	3	7	0	10	2	3	1	6	41
% App. Total	5.3	78.9	15.8		50	0	50		30	70	0		33.3	50	16.7		
PHF	.250	.625	.375	.679	.375	.000	.750	.750	.750	.583	.000	.625	.250	.750	.250	.500	.732

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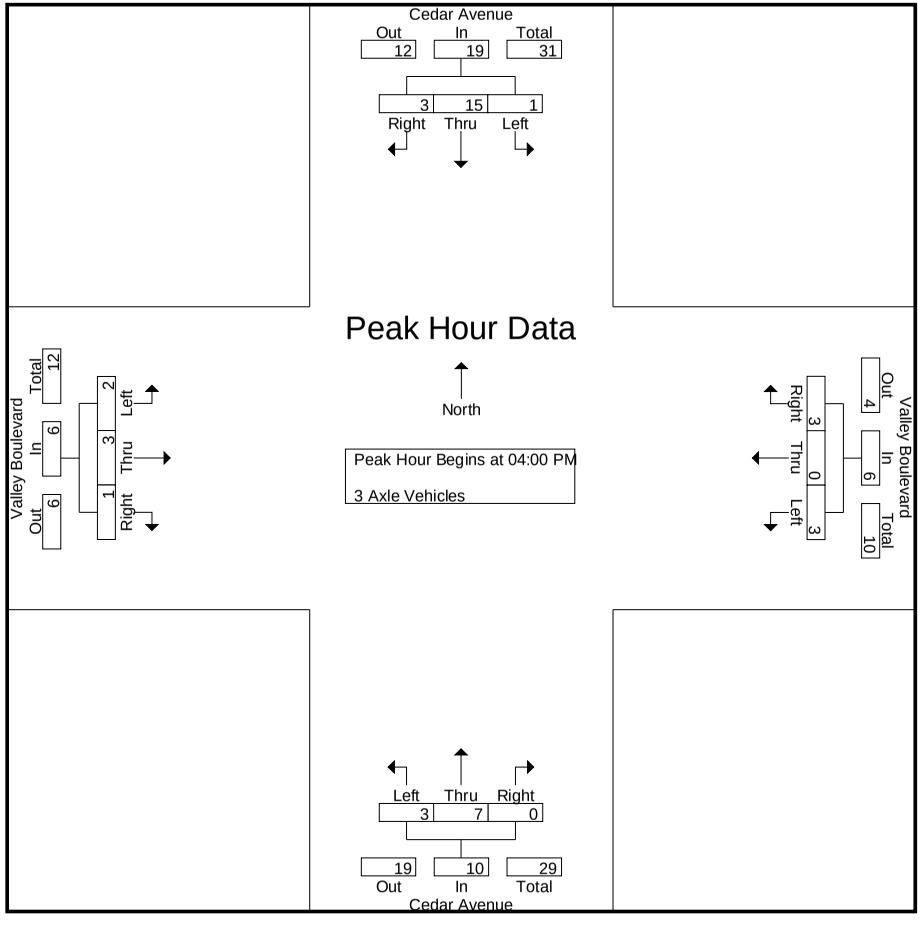
City of Rialto
N/S: Cedar Avenue
E/W: Valley Boulevard
Weather: Clear

File Name : 05_RLT_CE_Valley PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
E/W: Valley Boulevard
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File Name : 05_RLT_CE_Valley PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	1	**2**	3	**2**	0	0	**2**	0	2	0	2	**2**	**1**	0	**3**	
+15 mins.	0	5	1	6	0	0	**1**	1	**1**	0	0	1	0	0	0	0	
+30 mins.	**1**	**6**	0	**7**	1	0	1	2	1	2	0	3	0	1	**1**	2	
+45 mins.	0	3	0	3	0	0	1	1	1	**3**	0	**4**	0	1	0	1	
Total Volume	1	15	3	19	3	0	3	6	3	7	0	10	2	3	1	6	
% App. Total	5.3	78.9	15.8		50	0	50		30	70	0		33.3	50	16.7		
PHF	.250	.625	.375	.679	.375	.000	.750	.750	.750	.583	.000	.625	.250	.750	.250	.500	

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City of Rialto
N/S: Cedar Avenue
E/W: Valley Boulevard
Weather: Clear

File Name : 05_RLT_CE_Valley PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

	Cedar Avenue Southbound					Valley Boulevard Westbound					Cedar Avenue Northbound					Valley Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	6	1	0	7	0	0	1	1	1	0	7	3	0	10	1	0	1	0	2	1	20	21
04:15 PM	3	8	0	0	11	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	17	17
04:30 PM	1	6	1	1	8	1	1	1	0	3	4	5	0	0	9	0	0	0	0	0	1	20	21
04:45 PM	2	4	0	0	6	0	3	0	0	3	2	4	1	0	7	1	1	1	0	3	0	19	19
Total	6	24	2	1	32	1	4	2	1	7	6	22	4	0	32	2	1	2	0	5	2	76	78
05:00 PM	0	6	0	0	6	2	0	0	0	2	1	6	0	0	7	0	2	0	0	2	0	17	17
05:15 PM	0	7	1	0	8	0	0	0	0	0	1	4	0	0	5	0	1	2	1	3	1	16	17
05:30 PM	1	3	0	0	4	0	2	1	0	3	2	3	1	0	6	0	1	0	0	1	0	14	14
05:45 PM	0	3	1	0	4	0	0	1	0	1	5	5	0	0	10	0	1	2	0	3	0	18	18
Total	1	19	2	0	22	2	2	2	0	6	9	18	1	0	28	0	5	4	1	9	1	65	66
Grand Total	7	43	4	1	54	3	6	4	1	13	15	40	5	0	60	2	6	6	1	14	3	141	144
Apprch %	13	79.6	7.4			23.1	46.2	30.8			25	66.7	8.3			14.3	42.9	42.9					
Total %	5	30.5	2.8		38.3	2.1	4.3	2.8		9.2	10.6	28.4	3.5		42.6	1.4	4.3	4.3		9.9	2.1	97.9	

	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	6	**1**	7	0	0	**1**	1	0	**7**	**3**	**10**	**1**	0	**1**	2	**20**
04:15 PM	**3**	**8**	0	**11**	0	0	0	0	0	6	0	6	0	0	0	0	17
04:30 PM	1	6	1	8	**1**	1	1	**3**	**4**	5	0	9	0	0	0	0	20
04:45 PM	2	4	0	6	0	**3**	0	3	2	4	1	7	1	**1**	1	**3**	19
Total Volume	6	24	2	32	1	4	2	7	6	22	4	32	2	1	2	5	76
% App. Total	18.8	75	6.2		14.3	57.1	28.6		18.8	68.8	12.5		40	20	40		
PHF	.500	.750	.500	.727	.250	.333	.500	.583	.375	.786	.333	.800	.500	.250	.500	.417	.950

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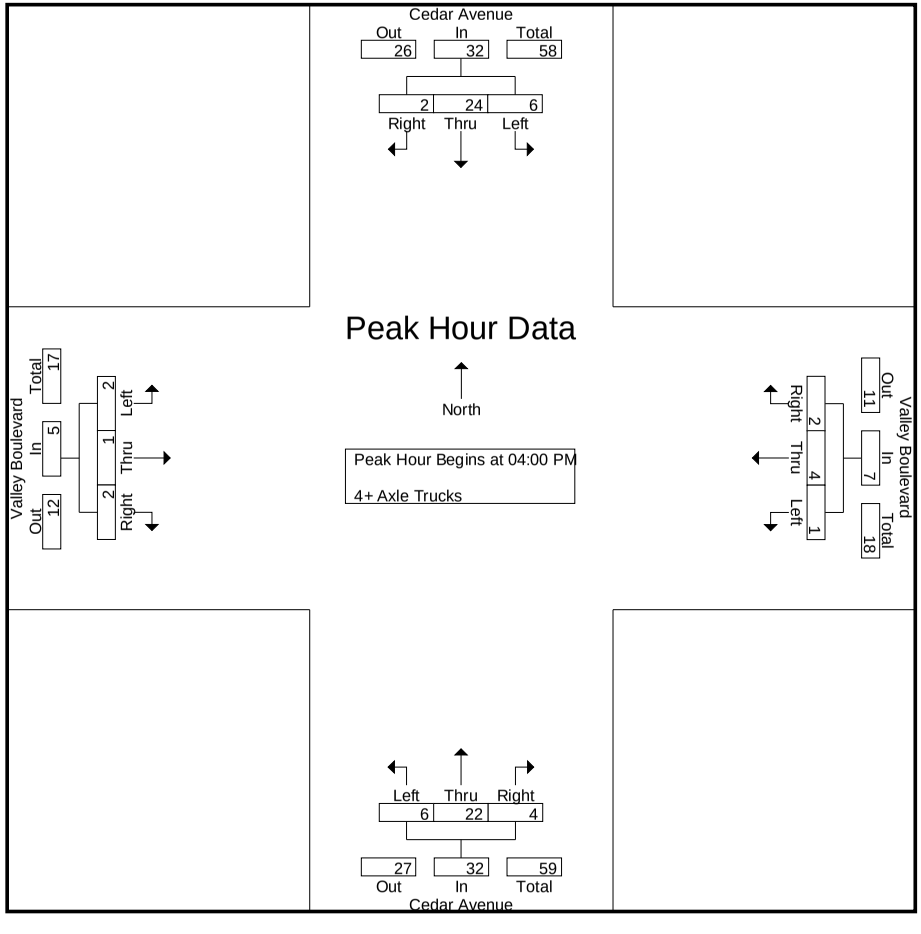
City of Rialto
N/S: Cedar Avenue
E/W: Valley Boulevard
Weather: Clear

File Name : 05_RLT_CE_Valley PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
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File Name : 05_RLT_CE_Valley PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				Valley Boulevard Westbound				Cedar Avenue Northbound				Valley Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	6	**1**	7	0	0	**1**	1	0	**7**	**3**	**10**	**1**	0	**1**	2	
+15 mins.	**3**	**8**	0	**11**	0	0	0	0	0	6	0	6	0	0	0	0	
+30 mins.	1	6	1	8	**1**	1	1	**3**	**4**	5	0	9	0	0	0	0	
+45 mins.	2	4	0	6	0	**3**	0	3	2	4	1	7	1	**1**	1	**3**	
Total Volume	6	24	2	32	1	4	2	7	6	22	4	32	2	1	2	5	
% App. Total	18.8	75	6.2		14.3	57.1	28.6		18.8	68.8	12.5		40	20	40		
PHF	.500	.750	.500	.727	.250	.333	.500	.583	.375	.786	.333	.800	.500	.250	.500	.417	

Location: Rialto
N/S: Cedar Avenue
E/W: Valley Boulevard

Date: 10/7/2021
Day: Thursday

PEDESTRIANS

	North Leg Cedar Avenue	East Leg Valley Boulevard	South Leg Cedar Avenue	West Leg Valley Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	1	0	0	0	1
7:30 AM	1	0	0	0	1
7:45 AM	0	0	0	1	1
8:00 AM	0	0	1	0	1
8:15 AM	0	0	0	0	0
8:30 AM	0	1	1	0	2
8:45 AM	0	1	1	0	2
TOTAL VOLUMES:	2	2	3	1	8

	North Leg Cedar Avenue	East Leg Valley Boulevard	South Leg Cedar Avenue	West Leg Valley Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	3	1	0	4
4:15 PM	0	2	0	0	2
4:30 PM	2	1	0	1	4
4:45 PM	1	1	2	0	4
5:00 PM	0	2	0	1	3
5:15 PM	0	1	0	0	1
5:30 PM	1	1	0	0	2
5:45 PM	1	0	1	0	2
TOTAL VOLUMES:	5	11	4	2	22

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Location: Rialto
N/S: Cedar Avenue
E/W: Valley Boulevard

Date: 10/7/2021
Day: Thursday

BICYCLES

	Southbound Cedar Avenue			Westbound Valley Boulevard			Northbound Cedar Avenue			Eastbound Valley Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1	0	0	0	0	0	0	0	2

	Southbound Cedar Avenue			Westbound Valley Boulevard			Northbound Cedar Avenue			Eastbound Valley Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
5:30 PM	0	0	0	0	2	0	0	0	0	0	3	0	5
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	0	0	0	0	3	0	0	0	0	0	4	1	8

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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Cedar Avenue Southbound					I-10 Westbound Off Ramp Westbound					Cedar Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	319	132	66	451	101	1	78	35	180	50	251	0	0	301	0	0	0	0	0	101	932	1033
07:15 AM	0	324	145	62	469	94	0	89	28	183	59	289	0	0	348	0	0	0	0	0	90	1000	1090
07:30 AM	0	307	165	82	472	82	0	85	29	167	48	287	0	0	335	0	0	0	0	0	111	974	1085
07:45 AM	0	291	143	61	434	103	0	109	32	212	50	294	0	0	344	0	0	0	0	0	93	990	1083
Total	0	1241	585	271	1826	380	1	361	124	742	207	1121	0	0	1328	0	0	0	0	0	395	3896	4291
08:00 AM	0	259	167	77	426	93	0	86	32	179	33	209	0	0	242	0	0	0	0	0	109	847	956
08:15 AM	0	240	158	61	398	84	0	96	32	180	59	223	0	0	282	0	0	0	0	0	93	860	953
08:30 AM	0	226	158	69	384	53	1	67	25	121	45	231	0	0	276	0	0	0	0	0	94	781	875
08:45 AM	0	231	136	63	367	65	0	80	35	145	51	201	0	0	252	0	0	0	0	0	98	764	862
Total	0	956	619	270	1575	295	1	329	124	625	188	864	0	0	1052	0	0	0	0	0	394	3252	3646
Grand Total	0	2197	1204	541	3401	675	2	690	248	1367	395	1985	0	0	2380	0	0	0	0	0	789	7148	7937
Apprch %	0	64.6	35.4			49.4	0.1	50.5			16.6	83.4	0			0	0	0					
Total %	0	30.7	16.8		47.6	9.4	0	9.7		19.1	5.5	27.8	0		33.3	0	0	0		0	9.9	90.1	
Passenger Vehicles	0	2084	1118		3710	607	0	646		1486	281	1830	0		2111	0	0	0		0	0	0	7307
% Passenger Vehicles	0	94.9	92.9	93.9	94.1	89.9	0	93.6	94	92	71.1	92.2	0	0	88.7	0	0	0	0	0	0	0	92.1
Large 2 Axle Vehicles	0	60	29		102	17	2	22		53	39	75	0		114	0	0	0		0	0	0	269
% Large 2 Axle Vehicles	0	2.7	2.4	2.4	2.6	2.5	100	3.2	4.8	3.3	9.9	3.8	0	0	4.8	0	0	0	0	0	0	0	3.4
3 Axle Vehicles	0	18	13		36	7	0	5		13	26	25	0		51	0	0	0		0	0	0	100
% 3 Axle Vehicles	0	0.8	1.1	0.9	0.9	1	0	0.7	0.4	0.8	6.6	1.3	0	0	2.1	0	0	0	0	0	0	0	1.3
4+ Axle Trucks	0	35	44		94	44	0	17		63	49	55	0		104	0	0	0		0	0	0	261
% 4+ Axle Trucks	0	1.6	3.7	2.8	2.4	6.5	0	2.5	0.8	3.9	12.4	2.8	0	0	4.4	0	0	0	0	0	0	0	3.3

	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	319	132	451	101	**1**	78	180	50	251	0	301	0	0	0	0	932
07:15 AM	0	**324**	145	469	94	0	89	183	**59**	289	0	**348**	0	0	0	0	**1000**
07:30 AM	0	307	**165**	**472**	82	0	85	167	48	287	0	335	0	0	0	0	974
07:45 AM	0	291	143	434	**103**	0	**109**	**212**	50	**294**	0	344	0	0	0	0	990
Total Volume	0	1241	585	1826	380	1	361	742	207	1121	0	1328	0	0	0	0	3896
% App. Total	0	68	32		51.2	0.1	48.7		15.6	84.4	0		0	0	0		
PHF	.000	.958	.886	.967	.922	.250	.828	.875	.877	.953	.000	.954	.000	.000	.000	.000	.974

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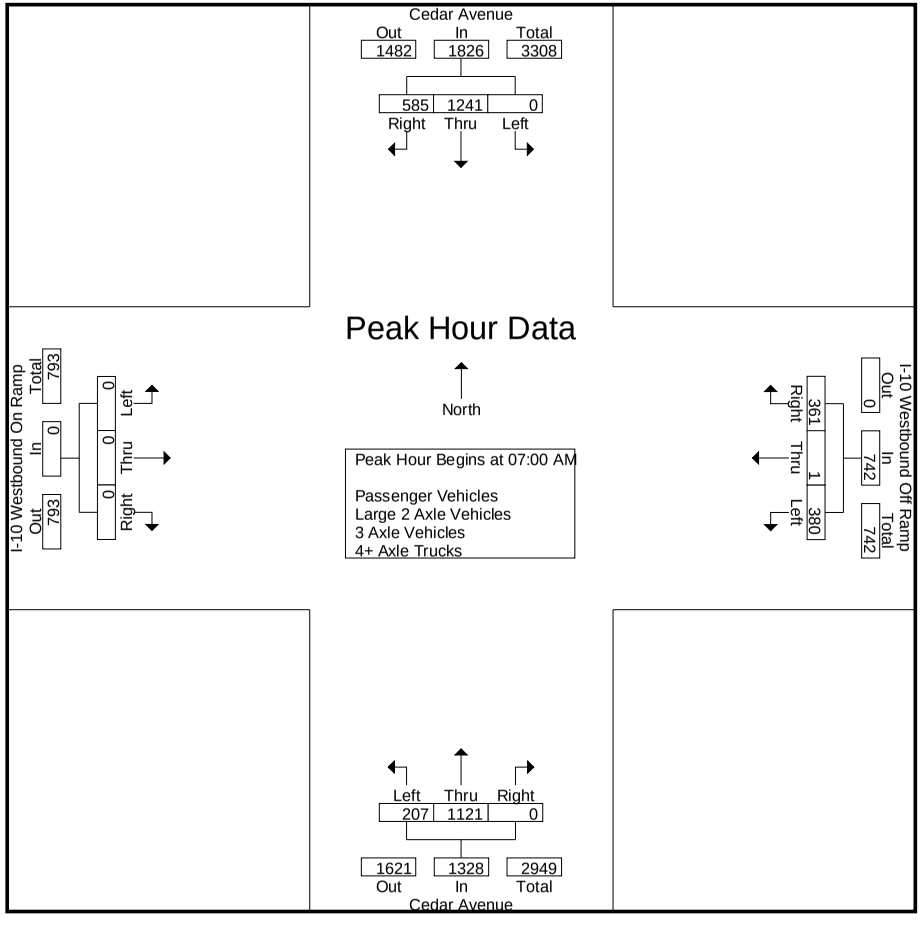
City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	319	132	451	101	**1**	78	180	50	251	0	301	0	0	0	0	
+15 mins.	0	**324**	145	469	94	0	89	183	**59**	289	0	**348**	0	0	0	0	
+30 mins.	0	307	**165**	**472**	82	0	85	167	48	287	0	335	0	0	0	0	
+45 mins.	0	291	143	434	**103**	0	**109**	**212**	50	**294**	0	344	0	0	0	0	
Total Volume	0	1241	585	1826	380	1	361	742	207	1121	0	1328	0	0	0	0	
% App. Total	0	68	32		51.2	0.1	48.7		15.6	84.4	0		0	0	0		
PHF	.000	.958	.886	.967	.922	.250	.828	.875	.877	.953	.000	.954	.000	.000	.000	.000	

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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Passenger Vehicles

	Cedar Avenue Southbound					I-10 Westbound Off Ramp Westbound					Cedar Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	312	125	63	437	96	0	71	32	167	40	233	0	0	273	0	0	0	0	0	95	877	972
07:15 AM	0	309	137	58	446	87	0	83	28	170	46	262	0	0	308	0	0	0	0	0	86	924	1010
07:30 AM	0	291	152	78	443	74	0	78	27	152	39	272	0	0	311	0	0	0	0	0	105	906	1011
07:45 AM	0	280	134	58	414	96	0	107	31	203	38	276	0	0	314	0	0	0	0	0	89	931	1020
Total	0	1192	548	257	1740	353	0	339	118	692	163	1043	0	0	1206	0	0	0	0	0	375	3638	4013
08:00 AM	0	245	155	72	400	81	0	80	29	161	22	185	0	0	207	0	0	0	0	0	101	768	869
08:15 AM	0	226	146	55	372	74	0	90	30	164	45	203	0	0	248	0	0	0	0	0	85	784	869
08:30 AM	0	213	148	65	361	44	0	61	23	105	22	207	0	0	229	0	0	0	0	0	88	695	783
08:45 AM	0	208	121	59	329	55	0	76	33	131	29	192	0	0	221	0	0	0	0	0	92	681	773
Total	0	892	570	251	1462	254	0	307	115	561	118	787	0	0	905	0	0	0	0	0	366	2928	3294
Grand Total	0	2084	1118	508	3202	607	0	646	233	1253	281	1830	0	0	2111	0	0	0	0	0	741	6566	7307
Apprch %	0	65.1	34.9			48.4	0	51.6			13.3	86.7	0			0	0	0					
Total %	0	31.7	17		48.8	9.2	0	9.8		19.1	4.3	27.9	0		32.2	0	0	0		0	10.1	89.9	

	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**312**	125	437	**96**	0	71	167	40	233	0	273	0	0	0	0	877
07:15 AM	0	309	137	**446**	87	0	83	170	**46**	262	0	308	0	0	0	0	924
07:30 AM	0	291	**152**	443	74	0	78	152	39	272	0	311	0	0	0	0	906
07:45 AM	0	280	134	414	96	0	**107**	**203**	38	**276**	0	**314**	0	0	0	0	**931**
Total Volume	0	1192	548	1740	353	0	339	692	163	1043	0	1206	0	0	0	0	3638
% App. Total	0	68.5	31.5		51	0	49		13.5	86.5	0		0	0	0		
PHF	.000	.955	.901	.975	.919	.000	.792	.852	.886	.945	.000	.960	.000	.000	.000	.000	.977

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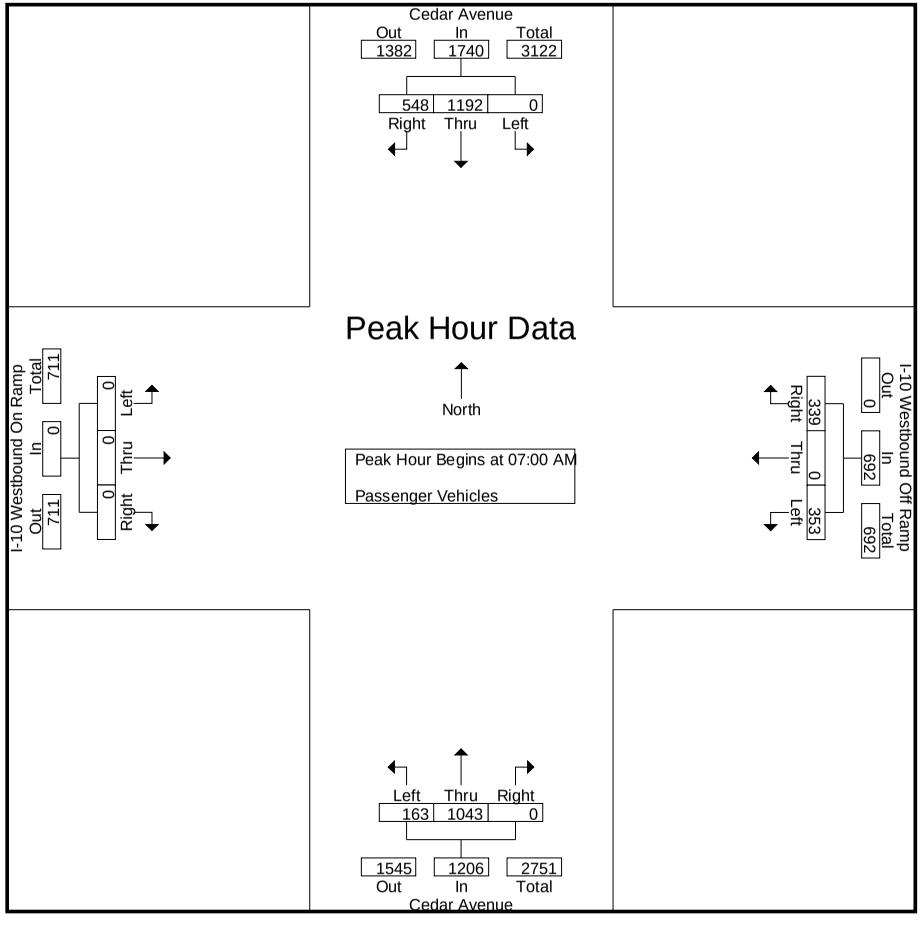
City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	**312**	125	437	**96**	0	71	167	40	233	0	273	0	0	0	0	
+15 mins.	0	309	137	**446**	87	0	83	170	**46**	262	0	308	0	0	0	0	
+30 mins.	0	291	**152**	443	74	0	78	152	39	272	0	311	0	0	0	0	
+45 mins.	0	280	134	414	96	0	**107**	**203**	38	**276**	0	**314**	0	0	0	0	
Total Volume	0	1192	548	1740	353	0	339	692	163	1043	0	1206	0	0	0	0	
% App. Total	0	68.5	31.5		51	0	49		13.5	86.5	0		0	0	0		
PHF	.000	.955	.901	.975	.919	.000	.792	.852	.886	.945	.000	.960	.000	.000	.000	.000	

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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Cedar Avenue Southbound					I-10 Westbound Off Ramp Westbound					Cedar Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	6	3	2	9	2	1	3	2	6	3	6	0	0	9	0	0	0	0	0	4	24	28
07:15 AM	0	6	2	2	8	3	0	3	0	6	2	17	0	0	19	0	0	0	0	0	2	33	35
07:30 AM	0	5	4	1	9	1	0	6	2	7	8	4	0	0	12	0	0	0	0	0	3	28	31
07:45 AM	0	7	4	2	11	1	0	2	1	3	4	9	0	0	13	0	0	0	0	0	3	27	30
Total	0	24	13	7	37	7	1	14	5	22	17	36	0	0	53	0	0	0	0	0	12	112	124
08:00 AM	0	9	5	3	14	1	0	2	2	3	3	13	0	0	16	0	0	0	0	0	5	33	38
08:15 AM	0	8	5	2	13	2	0	1	1	3	3	11	0	0	14	0	0	0	0	0	3	30	33
08:30 AM	0	8	0	0	8	4	1	3	2	8	3	10	0	0	13	0	0	0	0	0	2	29	31
08:45 AM	0	11	6	1	17	3	0	2	2	5	13	5	0	0	18	0	0	0	0	0	3	40	43
Total	0	36	16	6	52	10	1	8	7	19	22	39	0	0	61	0	0	0	0	0	13	132	145
Grand Total	0	60	29	13	89	17	2	22	12	41	39	75	0	0	114	0	0	0	0	0	25	244	269
Apprch %	0	67.4	32.6			41.5	4.9	53.7			34.2	65.8	0			0	0	0					
Total %	0	24.6	11.9		36.5	7	0.8	9		16.8	16	30.7	0		46.7	0	0	0		0	9.3	90.7	

	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	6	3	9	2	**1**	3	6	3	6	0	9	0	0	0	0	24
07:15 AM	0	6	2	8	**3**	0	3	6	2	**17**	0	**19**	0	0	0	0	**33**
07:30 AM	0	5	**4**	9	1	0	**6**	**7**	**8**	4	0	12	0	0	0	0	28
07:45 AM	0	**7**	4	**11**	1	0	2	3	4	9	0	13	0	0	0	0	27
Total Volume	0	24	13	37	7	1	14	22	17	36	0	53	0	0	0	0	112
% App. Total	0	64.9	35.1		31.8	4.5	63.6		32.1	67.9	0		0	0	0		
PHF	.000	.857	.813	.841	.583	.250	.583	.786	.531	.529	.000	.697	.000	.000	.000	.000	.848

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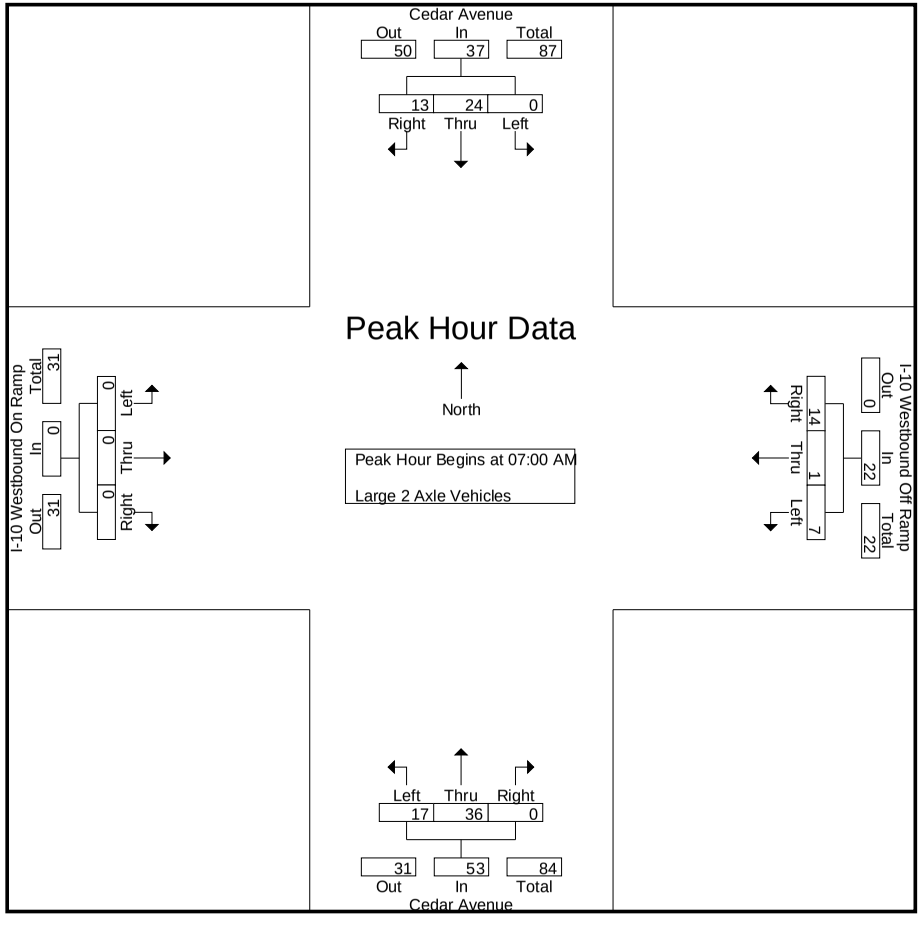
City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	6	3	9	2	**1**	3	6	3	6	0	9	0	0	0	0	
+15 mins.	0	6	2	8	**3**	0	3	6	2	**17**	0	**19**	0	0	0	0	
+30 mins.	0	5	**4**	9	1	0	**6**	**7**	**8**	4	0	12	0	0	0	0	
+45 mins.	0	**7**	4	**11**	1	0	2	3	4	9	0	13	0	0	0	0	
Total Volume	0	24	13	37	7	1	14	22	17	36	0	53	0	0	0	0	
% App. Total	0	64.9	35.1		31.8	4.5	63.6		32.1	67.9	0		0	0	0		
PHF	.000	.857	.813	.841	.583	.250	.583	.786	.531	.529	.000	.697	.000	.000	.000	.000	

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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

	Cedar Avenue Southbound					I-10 Westbound Off Ramp Westbound					Cedar Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	2	1	2	0	0	1	0	1	4	4	0	0	8	0	0	0	0	0	1	11	12
07:15 AM	0	5	1	0	6	0	0	1	0	1	2	2	0	0	4	0	0	0	0	0	0	11	11
07:30 AM	0	2	1	0	3	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	0	9	9
07:45 AM	0	1	2	1	3	1	0	0	0	1	2	4	0	0	6	0	0	0	0	0	1	10	11
Total	0	8	6	2	14	1	0	2	0	3	9	15	0	0	24	0	0	0	0	0	2	41	43
08:00 AM	0	3	2	0	5	3	0	0	0	3	4	4	0	0	8	0	0	0	0	0	0	16	16
08:15 AM	0	2	2	1	4	2	0	3	1	5	2	1	0	0	3	0	0	0	0	0	2	12	14
08:30 AM	0	0	1	1	1	0	0	0	0	0	8	4	0	0	12	0	0	0	0	0	1	13	14
08:45 AM	0	5	2	1	7	1	0	0	0	1	3	1	0	0	4	0	0	0	0	0	1	12	13
Total	0	10	7	3	17	6	0	3	1	9	17	10	0	0	27	0	0	0	0	0	4	53	57
Grand Total	0	18	13	5	31	7	0	5	1	12	26	25	0	0	51	0	0	0	0	0	6	94	100
Apprch %	0	58.1	41.9			58.3	0	41.7			51	49	0			0	0	0					
Total %	0	19.1	13.8		33	7.4	0	5.3		12.8	27.7	26.6	0		54.3	0	0	0		0	6	94	

	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	**2**	2	0	0	**1**	**1**	**4**	4	0	**8**	0	0	0	0	**11**
07:15 AM	0	**5**	1	**6**	0	0	1	1	2	2	0	4	0	0	0	0	11
07:30 AM	0	2	1	3	0	0	0	0	1	**5**	0	6	0	0	0	0	9
07:45 AM	0	1	2	3	**1**	0	0	1	2	4	0	6	0	0	0	0	10
Total Volume	0	8	6	14	1	0	2	3	9	15	0	24	0	0	0	0	41
% App. Total	0	57.1	42.9		33.3	0	66.7		37.5	62.5	0		0	0	0		
PHF	.000	.400	.750	.583	.250	.000	.500	.750	.563	.750	.000	.750	.000	.000	.000	.000	.932

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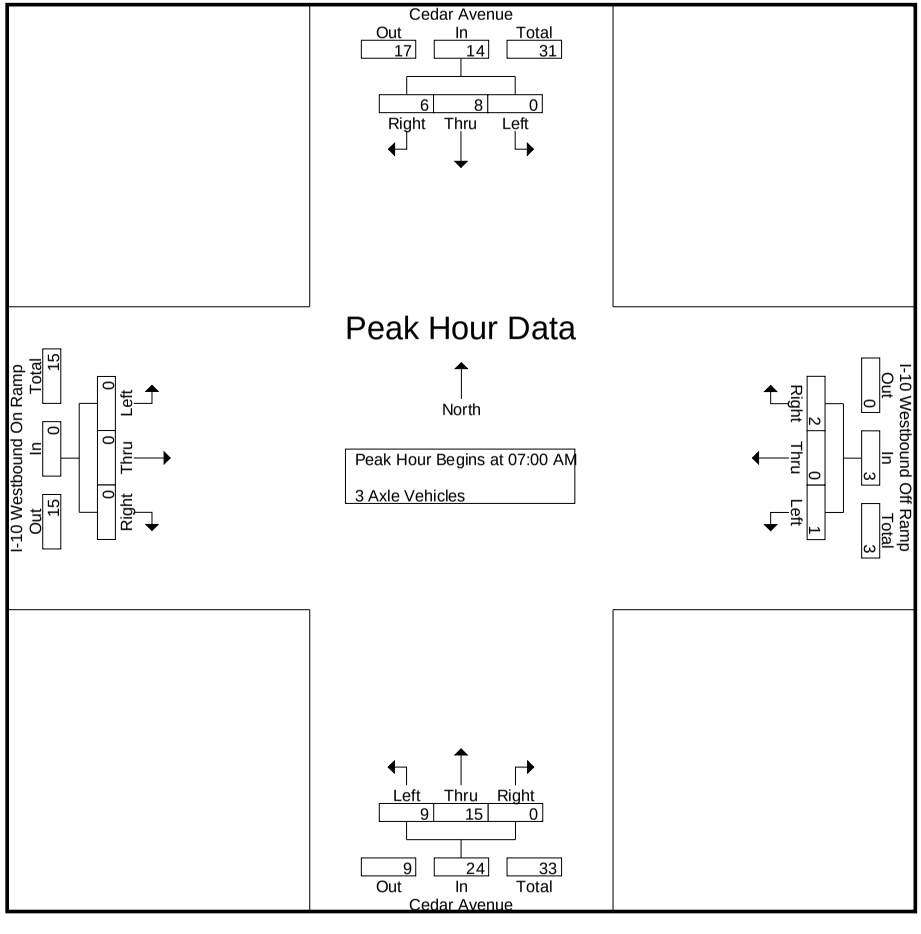
City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	**2**	2	0	0	**1**	**1**	**4**	4	0	**8**	0	0	0	0	
+15 mins.	0	**5**	1	**6**	0	0	1	1	2	2	0	4	0	0	0	0	
+30 mins.	0	2	1	3	0	0	0	0	1	**5**	0	6	0	0	0	0	
+45 mins.	0	1	2	3	**1**	0	0	1	2	4	0	6	0	0	0	0	
Total Volume	0	8	6	14	1	0	2	3	9	15	0	24	0	0	0	0	
% App. Total	0	57.1	42.9		33.3	0	66.7		37.5	62.5	0		0	0	0		
PHF	.000	.400	.750	.583	.250	.000	.500	.750	.563	.750	.000	.750	.000	.000	.000	.000	

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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

	Cedar Avenue Southbound					I-10 Westbound Off Ramp Westbound					Cedar Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	1	2	0	3	3	0	3	1	6	3	8	0	0	11	0	0	0	0	0	1	20	21
07:15 AM	0	4	5	2	9	4	0	2	0	6	9	8	0	0	17	0	0	0	0	0	2	32	34
07:30 AM	0	9	8	3	17	7	0	1	0	8	0	6	0	0	6	0	0	0	0	0	3	31	34
07:45 AM	0	3	3	0	6	5	0	0	0	5	6	5	0	0	11	0	0	0	0	0	0	22	22
Total	0	17	18	5	35	19	0	6	1	25	18	27	0	0	45	0	0	0	0	0	6	105	111
08:00 AM	0	2	5	2	7	8	0	4	1	12	4	7	0	0	11	0	0	0	0	0	3	30	33
08:15 AM	0	4	5	3	9	6	0	2	0	8	9	8	0	0	17	0	0	0	0	0	3	34	37
08:30 AM	0	5	9	3	14	5	0	3	0	8	12	10	0	0	22	0	0	0	0	0	3	44	47
08:45 AM	0	7	7	2	14	6	0	2	0	8	6	3	0	0	9	0	0	0	0	0	2	31	33
Total	0	18	26	10	44	25	0	11	1	36	31	28	0	0	59	0	0	0	0	0	11	139	150
Grand Total	0	35	44	15	79	44	0	17	2	61	49	55	0	0	104	0	0	0	0	0	17	244	261
Apprch %	0	44.3	55.7			72.1	0	27.9			47.1	52.9	0			0	0	0					
Total %	0	14.3	18		32.4	18	0	7		25	20.1	22.5	0		42.6	0	0	0		0	6.5	93.5	

	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	2	3	3	0	**3**	6	3	**8**	0	11	0	0	0	0	20
07:15 AM	0	4	5	9	4	0	2	6	**9**	8	0	**17**	0	0	0	0	**32**
07:30 AM	0	**9**	**8**	**17**	**7**	0	1	**8**	0	6	0	6	0	0	0	0	31
07:45 AM	0	3	3	6	5	0	0	5	6	5	0	11	0	0	0	0	22
Total Volume	0	17	18	35	19	0	6	25	18	27	0	45	0	0	0	0	105
% App. Total	0	48.6	51.4		76	0	24		40	60	0		0	0	0		
PHF	.000	.472	.563	.515	.679	.000	.500	.781	.500	.844	.000	.662	.000	.000	.000	.000	.820

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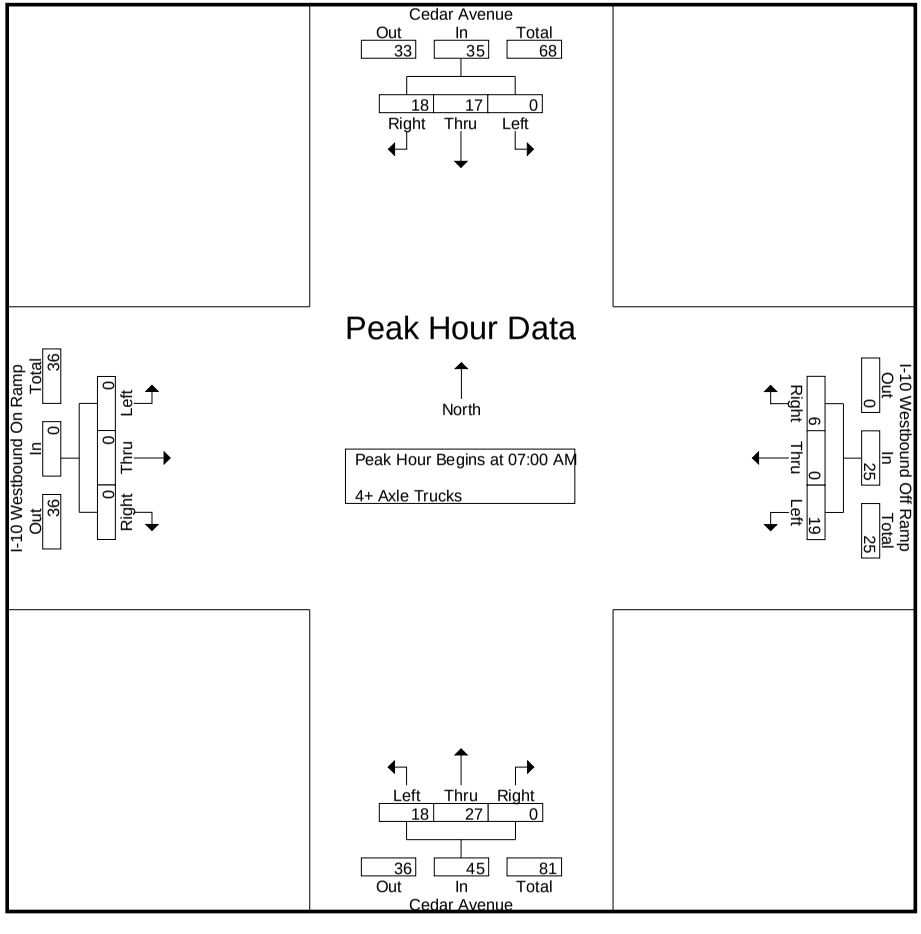
City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	1	2	3	3	0	**3**	6	3	**8**	0	11	0	0	0	0	
+15 mins.	0	4	5	9	4	0	2	6	**9**	8	0	**17**	0	0	0	0	
+30 mins.	0	**9**	**8**	**17**	**7**	0	1	**8**	0	6	0	6	0	0	0	0	
+45 mins.	0	3	3	6	5	0	0	5	6	5	0	11	0	0	0	0	
Total Volume	0	17	18	35	19	0	6	25	18	27	0	45	0	0	0	0	
% App. Total	0	48.6	51.4		76	0	24		40	60	0		0	0	0		
PHF	.000	.472	.563	.515	.679	.000	.500	.781	.500	.844	.000	.662	.000	.000	.000	.000	

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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Cedar Avenue Southbound					I-10 Westbound Off Ramp Westbound					Cedar Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	224	116	53	340	63	0	110	7	173	36	316	0	0	352	0	0	0	0	0	60	865	925
04:15 PM	0	285	129	46	414	65	0	87	1	152	35	313	0	0	348	0	0	0	0	0	47	914	961
04:30 PM	0	281	136	59	417	56	0	118	6	174	47	309	0	0	356	0	0	0	0	0	65	947	1012
04:45 PM	0	270	104	42	374	39	1	77	4	117	36	283	0	0	319	0	0	0	0	0	46	810	856
Total	0	1060	485	200	1545	223	1	392	18	616	154	1221	0	0	1375	0	0	0	0	0	218	3536	3754
05:00 PM	0	262	114	46	376	56	0	109	9	165	28	311	0	0	339	0	0	0	0	0	55	880	935
05:15 PM	0	285	109	42	394	47	0	94	1	141	36	303	0	0	339	0	0	0	0	0	43	874	917
05:30 PM	0	239	127	69	366	72	0	95	8	167	30	264	0	0	294	0	0	0	0	0	77	827	904
05:45 PM	0	267	119	62	386	66	1	74	5	141	35	334	0	0	369	0	0	0	0	0	67	896	963
Total	0	1053	469	219	1522	241	1	372	23	614	129	1212	0	0	1341	0	0	0	0	0	242	3477	3719
Grand Total	0	2113	954	419	3067	464	2	764	41	1230	283	2433	0	0	2716	0	0	0	0	0	460	7013	7473
Apprch %	0	68.9	31.1			37.7	0.2	62.1			10.4	89.6	0			0	0	0					
Total %	0	30.1	13.6		43.7	6.6	0	10.9		17.5	4	34.7	0		38.7	0	0	0		0	6.2	93.8	
Passenger Vehicles	0	2013	896		3306	411	1	726		1179	240	2329	0		2569	0	0	0		0	0	0	7054
% Passenger Vehicles	0	95.3	93.9	94.7	94.8	88.6	50	95	100	92.8	84.8	95.7	0	0	94.6	0	0	0	0	0	0	0	94.4
Large 2 Axle Vehicles	0	51	22		78	13	1	16		30	6	39	0		45	0	0	0		0	0	0	153
% Large 2 Axle Vehicles	0	2.4	2.3	1.2	2.2	2.8	50	2.1	0	2.4	2.1	1.6	0	0	1.7	0	0	0	0	0	0	0	2
3 Axle Vehicles	0	27	7		36	10	0	3		13	7	18	0		25	0	0	0		0	0	0	74
% 3 Axle Vehicles	0	1.3	0.7	0.5	1	2.2	0	0.4	0	1	2.5	0.7	0	0	0.9	0	0	0	0	0	0	0	1
4+ Axle Trucks	0	22	29		66	30	0	19		49	30	47	0		77	0	0	0		0	0	0	192
% 4+ Axle Trucks	0	1	3	3.6	1.9	6.5	0	2.5	0	3.9	10.6	1.9	0	0	2.8	0	0	0	0	0	0	0	2.6

	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	**285**	129	414	**65**	0	87	152	35	**313**	0	348	0	0	0	0	914
04:30 PM	0	281	**136**	**417**	56	0	**118**	**174**	**47**	309	0	**356**	0	0	0	0	**947**
04:45 PM	0	270	104	374	39	**1**	77	117	36	283	0	319	0	0	0	0	810
05:00 PM	0	262	114	376	56	0	109	165	28	311	0	339	0	0	0	0	880
Total Volume	0	1098	483	1581	216	1	391	608	146	1216	0	1362	0	0	0	0	3551
% App. Total	0	69.4	30.6		35.5	0.2	64.3		10.7	89.3	0		0	0	0		
PHF	.000	.963	.888	.948	.831	.250	.828	.874	.777	.971	.000	.956	.000	.000	.000	.000	.937

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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W PM
Site Code : 05121547
Start Date : 10/7/2021
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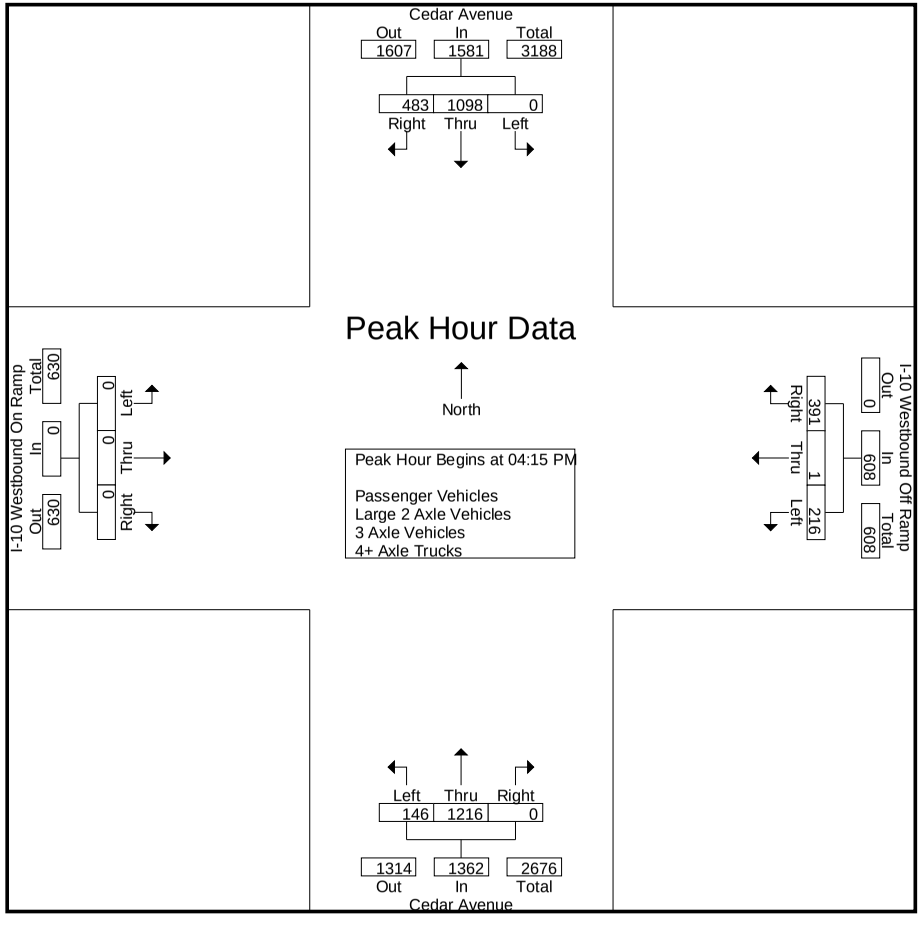

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	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	**285**	129	414	63	0	110	173	36	**316**	0	352	0	0	0	0	
+15 mins.	0	281	**136**	**417**	**65**	0	87	152	35	313	0	348	0	0	0	0	
+30 mins.	0	270	104	374	56	0	**118**	**174**	**47**	309	0	**356**	0	0	0	0	
+45 mins.	0	262	114	376	39	**1**	77	117	36	283	0	319	0	0	0	0	
Total Volume	0	1098	483	1581	223	1	392	616	154	1221	0	1375	0	0	0	0	
% App. Total	0	69.4	30.6		36.2	0.2	63.6		11.2	88.8	0		0	0	0		
PHF	.000	.963	.888	.948	.858	.250	.831	.885	.819	.966	.000	.966	.000	.000	.000	.000	

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File Name : 06_RLT_CE_10W PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Passenger Vehicles

	Cedar Avenue Southbound					I-10 Westbound Off Ramp Westbound					Cedar Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	214	107	51	321	58	0	107	7	165	27	302	0	0	329	0	0	0	0	0	58	815	873
04:15 PM	0	266	119	42	385	58	0	84	1	142	30	299	0	0	329	0	0	0	0	0	43	856	899
04:30 PM	0	262	131	57	393	48	0	113	6	161	40	292	0	0	332	0	0	0	0	0	63	886	949
04:45 PM	0	262	101	40	363	35	0	72	4	107	34	272	0	0	306	0	0	0	0	0	44	776	820
Total	0	1004	458	190	1462	199	0	376	18	575	131	1165	0	0	1296	0	0	0	0	0	208	3333	3541
05:00 PM	0	249	102	43	351	49	0	105	9	154	26	298	0	0	324	0	0	0	0	0	52	829	881
05:15 PM	0	271	100	39	371	44	0	91	1	135	28	291	0	0	319	0	0	0	0	0	40	825	865
05:30 PM	0	230	120	65	350	59	0	88	8	147	22	255	0	0	277	0	0	0	0	0	73	774	847
05:45 PM	0	259	116	60	375	60	1	66	5	127	33	320	0	0	353	0	0	0	0	0	65	855	920
Total	0	1009	438	207	1447	212	1	350	23	563	109	1164	0	0	1273	0	0	0	0	0	230	3283	3513
Grand Total	0	2013	896	397	2909	411	1	726	41	1138	240	2329	0	0	2569	0	0	0	0	0	438	6616	7054
Apprch %	0	69.2	30.8			36.1	0.1	63.8			9.3	90.7	0			0	0	0					
Total %	0	30.4	13.5		44	6.2	0	11		17.2	3.6	35.2	0		38.8	0	0	0		0	6.2	93.8	

	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	**266**	119	385	**58**	0	84	142	30	**299**	0	329	0	0	0	0	856
04:30 PM	0	262	**131**	**393**	48	0	**113**	**161**	**40**	292	0	**332**	0	0	0	0	**886**
04:45 PM	0	262	101	363	35	0	72	107	34	272	0	306	0	0	0	0	776
05:00 PM	0	249	102	351	49	0	105	154	26	298	0	324	0	0	0	0	829
Total Volume	0	1039	453	1492	190	0	374	564	130	1161	0	1291	0	0	0	0	3347
% App. Total	0	69.6	30.4		33.7	0	66.3		10.1	89.9	0		0	0	0		
PHF	.000	.977	.865	.949	.819	.000	.827	.876	.813	.971	.000	.972	.000	.000	.000	.000	.944

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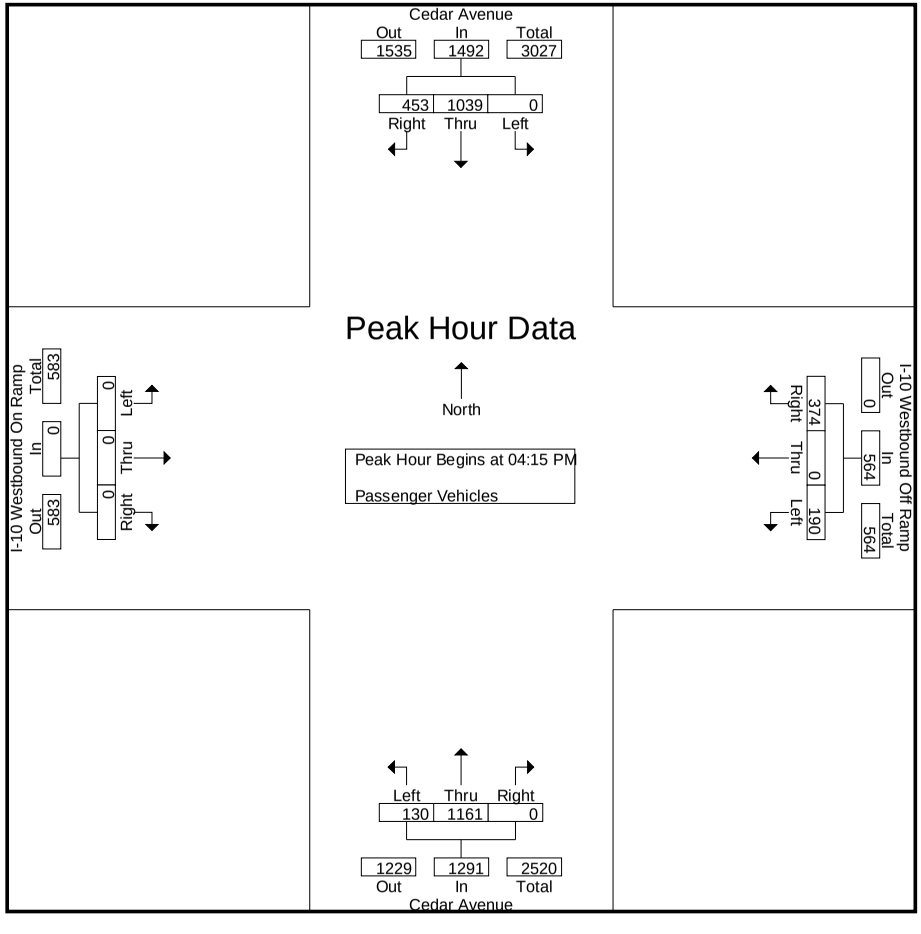
City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
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Start Date : 10/7/2021
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	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	0	**266**	119	385	**58**	0	84	142	30	**299**	0	329	0	0	0	0	
+15 mins.	0	262	**131**	**393**	48	0	**113**	**161**	**40**	292	0	**332**	0	0	0	0	
+30 mins.	0	262	101	363	35	0	72	107	34	272	0	306	0	0	0	0	
+45 mins.	0	249	102	351	49	0	105	154	26	298	0	324	0	0	0	0	
Total Volume	0	1039	453	1492	190	0	374	564	130	1161	0	1291	0	0	0	0	
% App. Total	0	69.6	30.4		33.7	0	66.3		10.1	89.9	0		0	0	0		
PHF	.000	.977	.865	.949	.819	.000	.827	.876	.813	.971	.000	.972	.000	.000	.000	.000	

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City of Rialto
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File Name : 06_RLT_CE_10W PM
Site Code : 05121547
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Groups Printed- Large 2 Axle Vehicles

	Cedar Avenue Southbound					I-10 Westbound Off Ramp Westbound					Cedar Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	6	4	0	10	2	0	1	0	3	0	3	0	0	3	0	0	0	0	0	0	16	16
04:15 PM	0	10	5	1	15	1	0	2	0	3	2	7	0	0	9	0	0	0	0	0	1	27	28
04:30 PM	0	7	0	0	7	2	0	1	0	3	1	7	0	0	8	0	0	0	0	0	0	18	18
04:45 PM	0	5	0	0	5	1	1	1	0	3	2	4	0	0	6	0	0	0	0	0	0	14	14
Total	0	28	9	1	37	6	1	5	0	12	5	21	0	0	26	0	0	0	0	0	1	75	76
05:00 PM	0	6	4	0	10	2	0	3	0	5	0	5	0	0	5	0	0	0	0	0	0	20	20
05:15 PM	0	7	2	0	9	1	0	1	0	2	0	6	0	0	6	0	0	0	0	0	0	17	17
05:30 PM	0	5	5	3	10	3	0	4	0	7	1	2	0	0	3	0	0	0	0	0	3	20	23
05:45 PM	0	5	2	1	7	1	0	3	0	4	0	5	0	0	5	0	0	0	0	0	1	16	17
Total	0	23	13	4	36	7	0	11	0	18	1	18	0	0	19	0	0	0	0	0	4	73	77
Grand Total	0	51	22	5	73	13	1	16	0	30	6	39	0	0	45	0	0	0	0	0	5	148	153
Apprch %	0	69.9	30.1			43.3	3.3	53.3			13.3	86.7	0			0	0	0					
Total %	0	34.5	14.9		49.3	8.8	0.7	10.8		20.3	4.1	26.4	0		30.4	0	0	0		0	3.3	96.7	

	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	**10**	**5**	**15**	1	0	2	3	**2**	**7**	0	**9**	0	0	0	0	**27**
04:30 PM	0	7	0	7	**2**	0	1	3	1	7	0	8	0	0	0	0	18
04:45 PM	0	5	0	5	1	**1**	1	3	2	4	0	6	0	0	0	0	14
05:00 PM	0	6	4	10	2	0	**3**	**5**	0	5	0	5	0	0	0	0	20
Total Volume	0	28	9	37	6	1	7	14	5	23	0	28	0	0	0	0	79
% App. Total	0	75.7	24.3		42.9	7.1	50		17.9	82.1	0		0	0	0		
PHF	.000	.700	.450	.617	.750	.250	.583	.700	.625	.821	.000	.778	.000	.000	.000	.000	.731

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City of Rialto
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E/W: I-10 Westbound Ramps
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File Name : 06_RLT_CE_10W PM
Site Code : 05121547
Start Date : 10/7/2021
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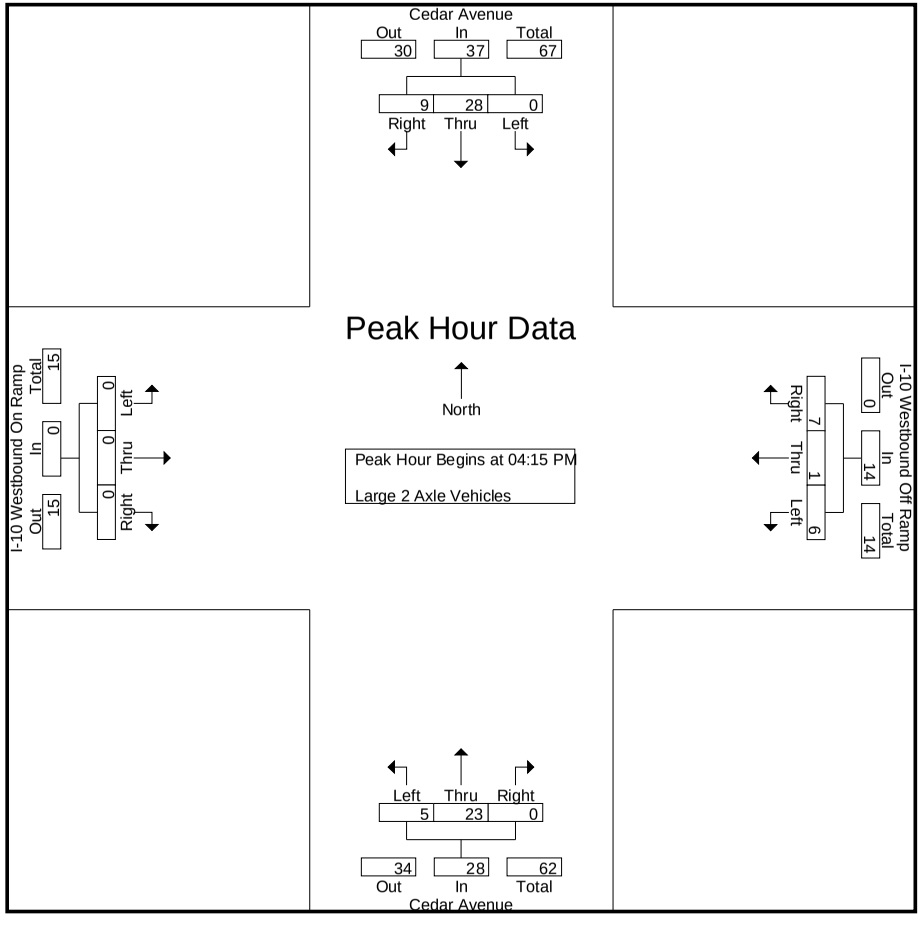

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	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	0	**10**	**5**	**15**	1	0	2	3	**2**	**7**	0	**9**	0	0	0	0	
+15 mins.	0	7	0	7	**2**	0	1	3	1	7	0	8	0	0	0	0	
+30 mins.	0	5	0	5	1	**1**	1	3	2	4	0	6	0	0	0	0	
+45 mins.	0	6	4	10	2	0	**3**	**5**	0	5	0	5	0	0	0	0	
Total Volume	0	28	9	37	6	1	7	14	5	23	0	28	0	0	0	0	
% App. Total	0	75.7	24.3		42.9	7.1	50		17.9	82.1	0		0	0	0		
PHF	.000	.700	.450	.617	.750	.250	.583	.700	.625	.821	.000	.778	.000	.000	.000	.000	

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Weather: Clear

File Name : 06_RLT_CE_10W PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

	Cedar Avenue Southbound					I-10 Westbound Off Ramp Westbound					Cedar Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	3	0	0	3	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	6	6
04:15 PM	0	5	0	0	5	2	0	1	0	3	0	1	0	0	1	0	0	0	0	0	0	9	9
04:30 PM	0	7	2	1	9	2	0	0	0	2	2	4	0	0	6	0	0	0	0	0	1	17	18
04:45 PM	0	2	1	0	3	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	6	6
Total	0	17	3	1	20	4	0	2	0	6	3	9	0	0	12	0	0	0	0	0	1	38	39
05:00 PM	0	5	1	0	6	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	7	7
05:15 PM	0	2	3	1	5	0	0	0	0	0	2	3	0	0	5	0	0	0	0	0	1	10	11
05:30 PM	0	2	0	0	2	3	0	1	0	4	2	1	0	0	3	0	0	0	0	0	0	9	9
05:45 PM	0	1	0	0	1	2	0	0	0	2	0	5	0	0	5	0	0	0	0	0	0	8	8
Total	0	10	4	1	14	6	0	1	0	7	4	9	0	0	13	0	0	0	0	0	1	34	35
Grand Total	0	27	7	2	34	10	0	3	0	13	7	18	0	0	25	0	0	0	0	0	2	72	74
Apprch %	0	79.4	20.6			76.9	0	23.1			28	72	0			0	0	0					
Total %	0	37.5	9.7		47.2	13.9	0	4.2		18.1	9.7	25	0		34.7	0	0	0		0	2.7	97.3	

	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	5	0	5	**2**	0	**1**	**3**	0	1	0	1	0	0	0	0	9
04:30 PM	0	**7**	**2**	**9**	2	0	0	2	**2**	**4**	0	**6**	0	0	0	0	**17**
04:45 PM	0	2	1	3	0	0	1	1	0	2	0	2	0	0	0	0	6
05:00 PM	0	5	1	6	1	0	0	1	0	0	0	0	0	0	0	0	7
Total Volume	0	19	4	23	5	0	2	7	2	7	0	9	0	0	0	0	39
% App. Total	0	82.6	17.4		71.4	0	28.6		22.2	77.8	0		0	0	0		
PHF	.000	.679	.500	.639	.625	.000	.500	.583	.250	.438	.000	.375	.000	.000	.000	.000	.574

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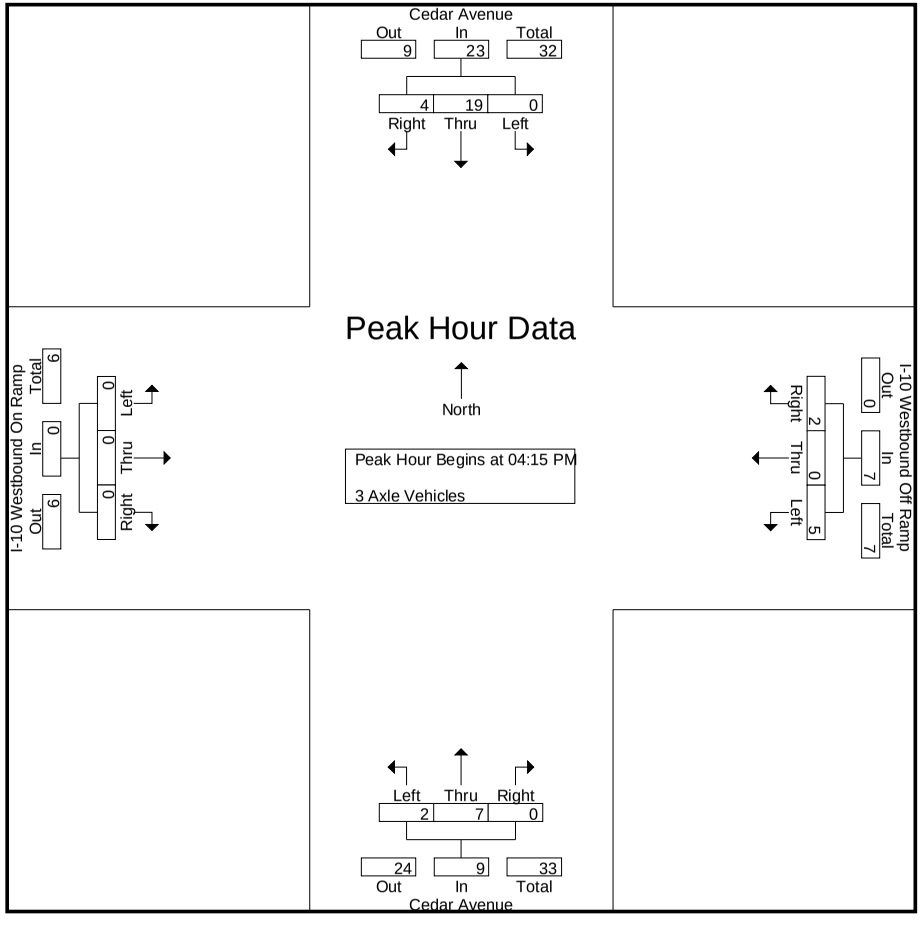
City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W PM
Site Code : 05121547
Start Date : 10/7/2021

	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	0	5	0	5	**2**	0	**1**	**3**	0	1	0	1	0	0	0	0	
+15 mins.	0	**7**	**2**	**9**	2	0	0	2	**2**	**4**	0	**6**	0	0	0	0	
+30 mins.	0	2	1	3	0	0	1	1	0	2	0	2	0	0	0	0	
+45 mins.	0	5	1	6	1	0	0	1	0	0	0	0	0	0	0	0	
Total Volume	0	19	4	23	5	0	2	7	2	7	0	9	0	0	0	0	
% App. Total	0	82.6	17.4		71.4	0	28.6		22.2	77.8	0		0	0	0		
PHF	.000	.679	.500	.639	.625	.000	.500	.583	.250	.438	.000	.375	.000	.000	.000	.000	

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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

	Cedar Avenue Southbound					I-10 Westbound Off Ramp Westbound					Cedar Avenue Northbound					I-10 Westbound On Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	1	5	2	6	3	0	2	0	5	8	9	0	0	17	0	0	0	0	0	2	28	30
04:15 PM	0	4	5	3	9	4	0	0	0	4	3	6	0	0	9	0	0	0	0	0	3	22	25
04:30 PM	0	5	3	1	8	4	0	4	0	8	4	6	0	0	10	0	0	0	0	0	1	26	27
04:45 PM	0	1	2	2	3	3	0	3	0	6	0	5	0	0	5	0	0	0	0	0	2	14	16
Total	0	11	15	8	26	14	0	9	0	23	15	26	0	0	41	0	0	0	0	0	8	90	98
05:00 PM	0	2	7	3	9	4	0	1	0	5	2	8	0	0	10	0	0	0	0	0	3	24	27
05:15 PM	0	5	4	2	9	2	0	2	0	4	6	3	0	0	9	0	0	0	0	0	2	22	24
05:30 PM	0	2	2	1	4	7	0	2	0	9	5	6	0	0	11	0	0	0	0	0	1	24	25
05:45 PM	0	2	1	1	3	3	0	5	0	8	2	4	0	0	6	0	0	0	0	0	1	17	18
Total	0	11	14	7	25	16	0	10	0	26	15	21	0	0	36	0	0	0	0	0	7	87	94
Grand Total	0	22	29	15	51	30	0	19	0	49	30	47	0	0	77	0	0	0	0	0	15	177	192
Apprch %	0	43.1	56.9			61.2	0	38.8			39	61	0			0	0	0					
Total %	0	12.4	16.4		28.8	16.9	0	10.7		27.7	16.9	26.6	0		43.5	0	0	0		0	7.8	92.2	

	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	4	5	**9**	**4**	0	0	4	3	6	0	9	0	0	0	0	22
04:30 PM	0	**5**	3	8	4	0	**4**	**8**	**4**	6	0	**10**	0	0	0	0	**26**
04:45 PM	0	1	2	3	3	0	3	6	0	5	0	5	0	0	0	0	14
05:00 PM	0	2	**7**	9	4	0	1	5	2	**8**	0	10	0	0	0	0	24
Total Volume	0	12	17	29	15	0	8	23	9	25	0	34	0	0	0	0	86
% App. Total	0	41.4	58.6		65.2	0	34.8		26.5	73.5	0		0	0	0		
PHF	.000	.600	.607	.806	.938	.000	.500	.719	.563	.781	.000	.850	.000	.000	.000	.000	.827

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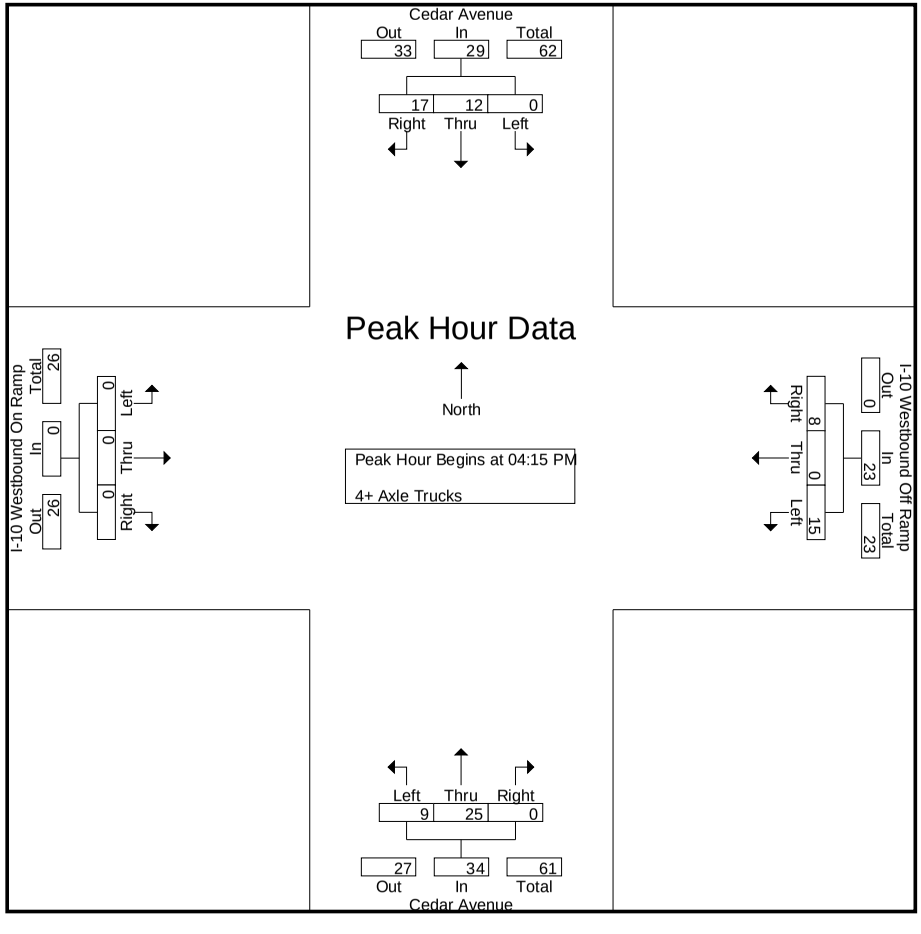
City of Rialto
N/S: Cedar Avenue
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_RLT_CE_10W PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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File Name : 06_RLT_CE_10W PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				I-10 Westbound Off Ramp Westbound				Cedar Avenue Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	0	4	5	**9**	**4**	0	0	4	3	6	0	9	0	0	0	0	
+15 mins.	0	**5**	3	8	4	0	**4**	**8**	**4**	6	0	**10**	0	0	0	0	
+30 mins.	0	1	2	3	3	0	3	6	0	5	0	5	0	0	0	0	
+45 mins.	0	2	**7**	9	4	0	1	5	2	**8**	0	10	0	0	0	0	
Total Volume	0	12	17	29	15	0	8	23	9	25	0	34	0	0	0	0	
% App. Total	0	41.4	58.6		65.2	0	34.8		26.5	73.5	0		0	0	0		
PHF	.000	.600	.607	.806	.938	.000	.500	.719	.563	.781	.000	.850	.000	.000	.000	.000	

Location: Rialto
N/S: Cedar Avenue
E/W: I-10 WB Ramps

Date: 10/7/2021
Day: Thursday

PEDESTRIANS

	North Leg Cedar Avenue	East Leg I-10 WB Ramps	South Leg Cedar Avenue	West Leg I-10 WB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	1	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	2	2
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	3	0	1	4
TOTAL VOLUMES:	0	4	0	3	7

	North Leg Cedar Avenue	East Leg I-10 WB Ramps	South Leg Cedar Avenue	West Leg I-10 WB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	1	0	0	1
4:15 PM	0	1	0	0	1
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	1	1
5:00 PM	0	2	0	0	2
5:15 PM	0	1	0	0	1
5:30 PM	0	3	0	0	3
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	9	0	1	10

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Location: Rialto
N/S: Cedar Avenue
E/W: I-10 WB Ramps

Date: 10/7/2021
Day: Thursday

BICYCLES

	Southbound Cedar Avenue			Westbound I-10 WB Ramps			Northbound Cedar Avenue			Eastbound I-10 WB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

	Southbound Cedar Avenue			Westbound I-10 WB Ramps			Northbound Cedar Avenue			Eastbound I-10 WB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	3	0	0	0	0	0	2	0	0	0	0	5

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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Cedar Avenue Southbound					I-10 Eastbound On Ramp Westbound					Cedar Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	85	349	0	0	434	0	0	0	0	0	0	218	84	41	302	86	1	61	9	148	50	884	934
07:15 AM	95	326	0	0	421	0	0	0	0	0	0	266	82	43	348	82	2	66	11	150	54	919	973
07:30 AM	97	288	0	0	385	0	0	0	0	0	0	225	111	52	336	106	0	77	1	183	53	904	957
07:45 AM	104	289	0	0	393	0	0	0	0	0	0	232	87	48	319	108	0	87	11	195	59	907	966
Total	381	1252	0	0	1633	0	0	0	0	0	0	941	364	184	1305	382	3	291	32	676	216	3614	3830
08:00 AM	101	247	0	0	348	0	0	0	0	0	0	137	51	30	188	113	1	88	3	202	33	738	771
08:15 AM	89	231	0	0	320	0	0	0	0	0	0	171	75	27	246	99	0	50	9	149	36	715	751
08:30 AM	68	212	0	0	280	0	0	0	0	0	0	180	87	40	267	102	0	44	11	146	51	693	744
08:45 AM	93	205	0	0	298	0	0	0	0	0	0	174	63	22	237	77	1	67	9	145	31	680	711
Total	351	895	0	0	1246	0	0	0	0	0	0	662	276	119	938	391	2	249	32	642	151	2826	2977
Grand Total	732	2147	0	0	2879	0	0	0	0	0	0	1603	640	303	2243	773	5	540	64	1318	367	6440	6807
Apprch %	25.4	74.6	0			0	0	0			0	71.5	28.5			58.6	0.4	41					
Total %	11.4	33.3	0		44.7	0	0	0		0	0	24.9	9.9		34.8	12	0.1	8.4		20.5	5.4	94.6	
Passenger Vehicles	684	2000	0		2684	0	0	0		0	0	1410	571		2261	681	2	446		1183	0	0	6128
% Passenger Vehicles	93.4	93.2	0	0	93.2	0	0	0	0	0	0	88	89.2	92.4	88.8	88.1	40	82.6	84.4	85.6	0	0	90
Large 2 Axle Vehicles	25	69	0		94	0	0	0		0	0	97	24		129	34	2	30		71	0	0	294
% Large 2 Axle Vehicles	3.4	3.2	0	0	3.3	0	0	0	0	0	0	6.1	3.8	2.6	5.1	4.4	40	5.6	7.8	5.1	0	0	4.3
3 Axle Vehicles	3	21	0		24	0	0	0		0	0	36	10		48	14	0	23		39	0	0	111
% 3 Axle Vehicles	0.4	1	0	0	0.8	0	0	0	0	0	0	2.2	1.6	0.7	1.9	1.8	0	4.3	3.1	2.8	0	0	1.6
4+ Axle Trucks	20	57	0		77	0	0	0		0	0	60	35		108	44	1	41		89	0	0	274
% 4+ Axle Trucks	2.7	2.7	0	0	2.7	0	0	0	0	0	0	3.7	5.5	4.3	4.2	5.7	20	7.6	4.7	6.4	0	0	4

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	85	**349**	0	**434**	0	0	0	0	0	218	84	302	86	1	61	148	884
07:15 AM	95	326	0	421	0	0	0	0	0	**266**	82	**348**	82	**2**	66	150	**919**
07:30 AM	97	288	0	385	0	0	0	0	0	225	**111**	336	106	0	77	183	904
07:45 AM	**104**	289	0	393	0	0	0	0	0	232	87	319	**108**	0	**87**	**195**	907
Total Volume	381	1252	0	1633	0	0	0	0	0	941	364	1305	382	3	291	676	3614
% App. Total	23.3	76.7	0		0	0	0		0	72.1	27.9		56.5	0.4	43		
PHF	.916	.897	.000	.941	.000	.000	.000	.000	.000	.884	.820	.938	.884	.375	.836	.867	.983

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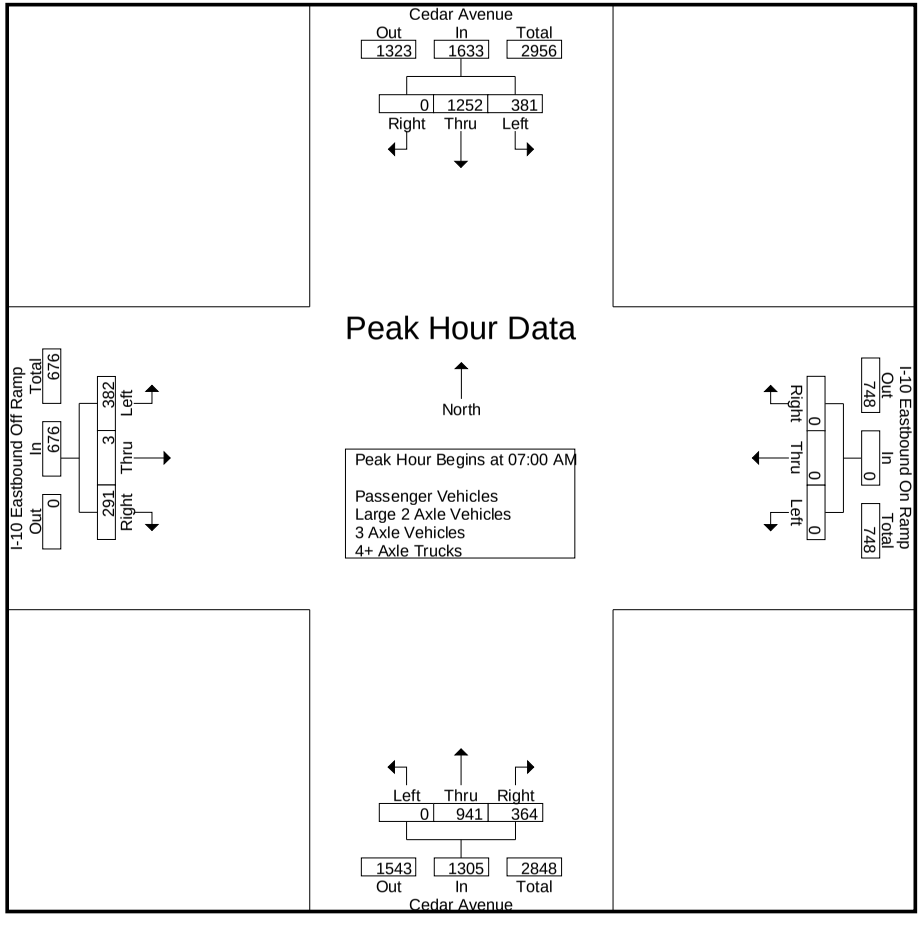
City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
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File Name : 07_RLT_CE_10E AM
Site Code : 05121547
Start Date : 10/7/2021

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:15 AM				
+0 mins.	85	**349**	0	**434**	0	0	0	0	0	218	84	302	82	**2**	66	150	
+15 mins.	95	326	0	421	0	0	0	0	0	**266**	82	**348**	106	0	77	183	
+30 mins.	97	288	0	385	0	0	0	0	0	225	**111**	336	108	0	87	195	
+45 mins.	**104**	289	0	393	0	0	0	0	0	232	87	319	**113**	1	**88**	**202**	
Total Volume	381	1252	0	1633	0	0	0	0	0	941	364	1305	409	3	318	730	
% App. Total	23.3	76.7	0		0	0	0		0	72.1	27.9		56	0.4	43.6		
PHF	.916	.897	.000	.941	.000	.000	.000	.000	.000	.884	.820	.938	.905	.375	.903	.903	

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File Name : 07_RLT_CE_10E AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Passenger Vehicles

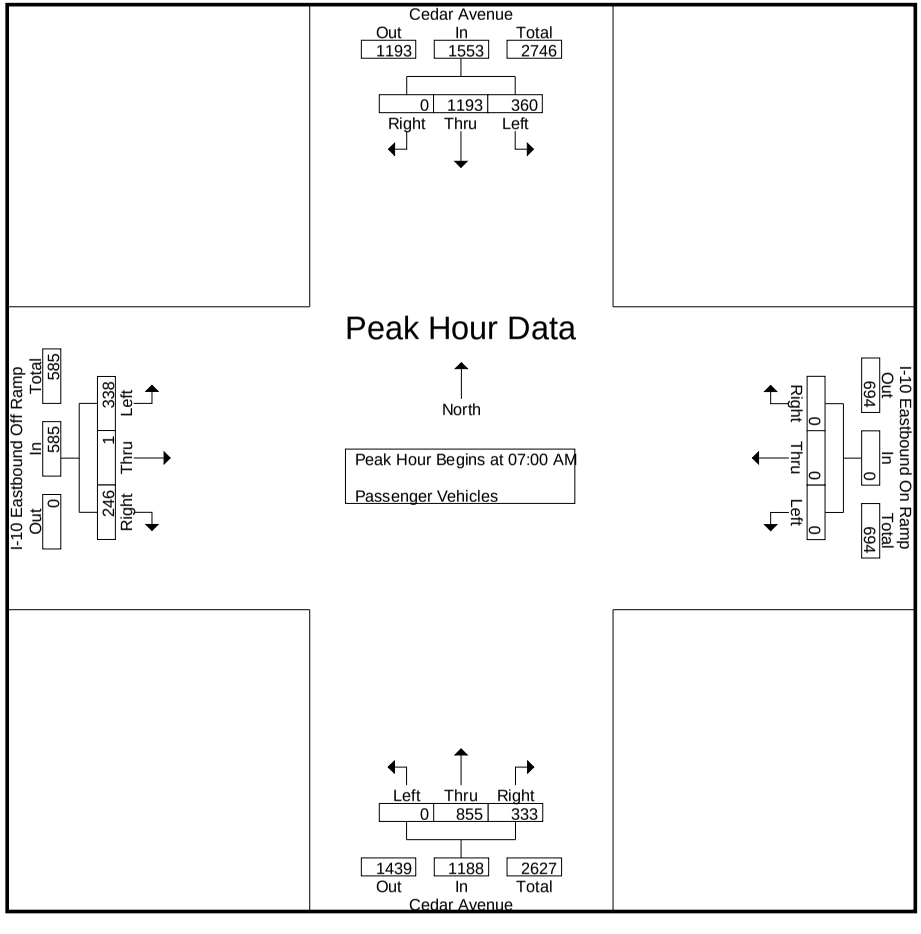
	Cedar Avenue Southbound					I-10 Eastbound On Ramp Westbound					Cedar Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	81	336	0	0	417	0	0	0	0	0	0	194	77	39	271	76	0	49	8	125	47	813	860
07:15 AM	89	310	0	0	399	0	0	0	0	0	0	242	73	41	315	71	1	60	8	132	49	846	895
07:30 AM	92	270	0	0	362	0	0	0	0	0	0	209	103	47	312	96	0	63	1	159	48	833	881
07:45 AM	98	277	0	0	375	0	0	0	0	0	0	210	80	46	290	95	0	74	10	169	56	834	890
Total	360	1193	0	0	1553	0	0	0	0	0	0	855	333	173	1188	338	1	246	27	585	200	3326	3526
08:00 AM	93	226	0	0	319	0	0	0	0	0	0	118	44	27	162	95	1	73	3	169	30	650	680
08:15 AM	85	209	0	0	294	0	0	0	0	0	0	151	66	25	217	88	0	42	7	130	32	641	673
08:30 AM	63	191	0	0	254	0	0	0	0	0	0	142	77	38	219	89	0	33	10	122	48	595	643
08:45 AM	83	181	0	0	264	0	0	0	0	0	0	144	51	17	195	71	0	52	7	123	24	582	606
Total	324	807	0	0	1131	0	0	0	0	0	0	555	238	107	793	343	1	200	27	544	134	2468	2602
Grand Total	684	2000	0	0	2684	0	0	0	0	0	0	1410	571	280	1981	681	2	446	54	1129	334	5794	6128
Apprch %	25.5	74.5	0			0	0	0			0	71.2	28.8			60.3	0.2	39.5					
Total %	11.8	34.5	0		46.3	0	0	0		0	0	24.3	9.9		34.2	11.8	0	7.7		19.5	5.5	94.5	

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	81	**336**	0	**417**	0	0	0	0	0	194	77	271	76	0	49	125	813
07:15 AM	89	310	0	399	0	0	0	0	0	**242**	73	**315**	71	**1**	60	132	**846**
07:30 AM	92	270	0	362	0	0	0	0	0	209	**103**	312	**96**	0	63	159	833
07:45 AM	**98**	277	0	375	0	0	0	0	0	210	80	290	95	0	**74**	**169**	834
Total Volume	360	1193	0	1553	0	0	0	0	0	855	333	1188	338	1	246	585	3326
% App. Total	23.2	76.8	0		0	0	0		0	72	28		57.8	0.2	42.1		
PHF	.918	.888	.000	.931	.000	.000	.000	.000	.000	.883	.808	.943	.880	.250	.831	.865	.983

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	81	**336**	0	**417**	0	0	0	0	0	194	77	271	76	0	49	125	
+15 mins.	89	310	0	399	0	0	0	0	0	**242**	73	**315**	71	**1**	60	132	
+30 mins.	92	270	0	362	0	0	0	0	0	209	**103**	312	**96**	0	63	159	
+45 mins.	**98**	277	0	375	0	0	0	0	0	210	80	290	95	0	**74**	**169**	
Total Volume	360	1193	0	1553	0	0	0	0	0	855	333	1188	338	1	246	585	
% App. Total	23.2	76.8	0		0	0	0		0	72	28		57.8	0.2	42.1		
PHF	.918	.888	.000	.931	.000	.000	.000	.000	.000	.883	.808	.943	.880	.250	.831	.865	

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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Cedar Avenue Southbound					I-10 Eastbound On Ramp Westbound					Cedar Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	10	0	0	13	0	0	0	0	0	0	14	3	1	17	0	1	5	0	6	1	36	37
07:15 AM	4	6	0	0	10	0	0	0	0	0	0	11	5	1	16	5	1	3	2	9	3	35	38
07:30 AM	0	8	0	0	8	0	0	0	0	0	0	13	3	2	16	2	0	4	0	6	2	30	32
07:45 AM	1	6	0	0	7	0	0	0	0	0	0	10	1	0	11	5	0	3	0	8	0	26	26
Total	8	30	0	0	38	0	0	0	0	0	0	48	12	4	60	12	2	15	2	29	6	127	133
08:00 AM	8	6	0	0	14	0	0	0	0	0	0	10	2	1	12	9	0	4	0	13	1	39	40
08:15 AM	3	8	0	0	11	0	0	0	0	0	0	11	3	0	14	4	0	3	1	7	1	32	33
08:30 AM	3	13	0	0	16	0	0	0	0	0	0	9	3	1	12	6	0	4	1	10	2	38	40
08:45 AM	3	12	0	0	15	0	0	0	0	0	0	19	4	2	23	3	0	4	1	7	3	45	48
Total	17	39	0	0	56	0	0	0	0	0	0	49	12	4	61	22	0	15	3	37	7	154	161
Grand Total	25	69	0	0	94	0	0	0	0	0	0	97	24	8	121	34	2	30	5	66	13	281	294
Apprch %	26.6	73.4	0			0	0	0			0	80.2	19.8			51.5	3	45.5					
Total %	8.9	24.6	0		33.5	0	0	0		0	0	34.5	8.5		43.1	12.1	0.7	10.7		23.5	4.4	95.6	

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	**10**	0	**13**	0	0	0	0	0	**14**	3	**17**	0	**1**	**5**	6	**36**
07:15 AM	**4**	6	0	10	0	0	0	0	0	11	**5**	16	**5**	1	3	**9**	35
07:30 AM	0	8	0	8	0	0	0	0	0	13	3	16	2	0	4	6	30
07:45 AM	1	6	0	7	0	0	0	0	0	10	1	11	5	0	3	8	26
Total Volume	8	30	0	38	0	0	0	0	0	48	12	60	12	2	15	29	127
% App. Total	21.1	78.9	0		0	0	0		0	80	20		41.4	6.9	51.7		
PHF	.500	.750	.000	.731	.000	.000	.000	.000	.000	.857	.600	.882	.600	.500	.750	.806	.882

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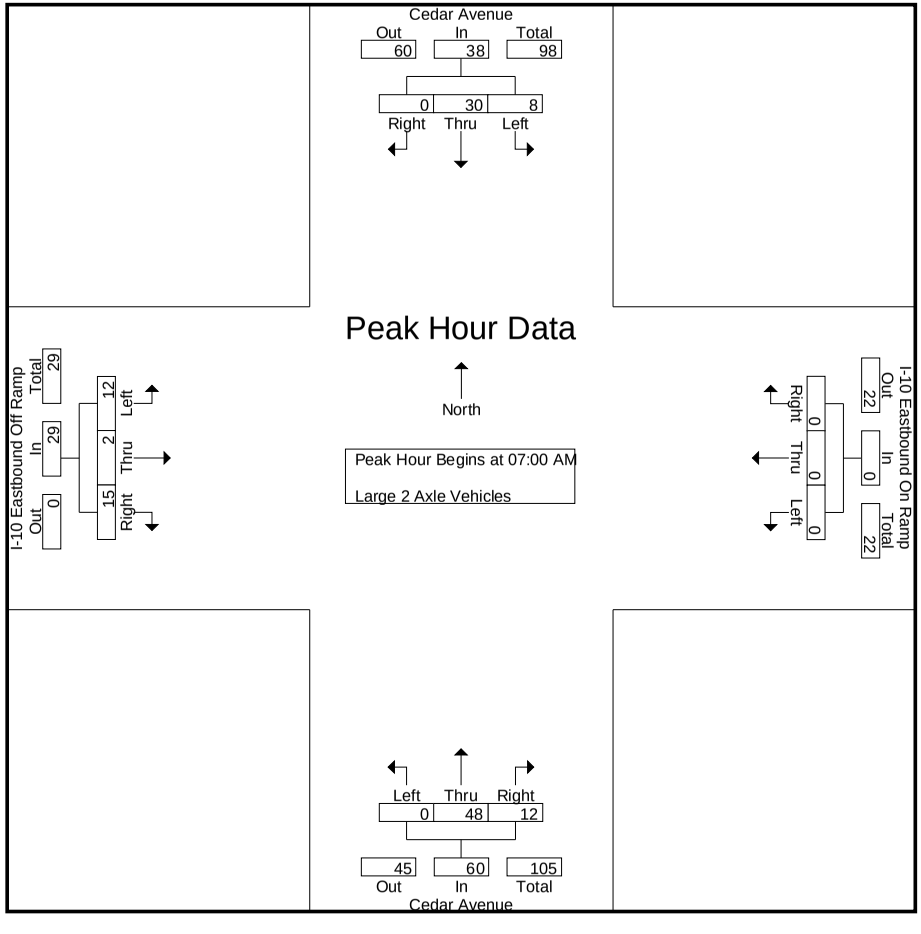
City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	3	**10**	0	**13**	0	0	0	0	0	**14**	3	**17**	0	**1**	**5**	6	
+15 mins.	**4**	6	0	10	0	0	0	0	0	11	**5**	16	**5**	1	3	**9**	
+30 mins.	0	8	0	8	0	0	0	0	0	13	3	16	2	0	4	6	
+45 mins.	1	6	0	7	0	0	0	0	0	10	1	11	5	0	3	8	
Total Volume	8	30	0	38	0	0	0	0	0	48	12	60	12	2	15	29	
% App. Total	21.1	78.9	0		0	0	0		0	80	20		41.4	6.9	51.7		
PHF	.500	.750	.000	.731	.000	.000	.000	.000	.000	.857	.600	.882	.600	.500	.750	.806	

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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

	Cedar Avenue Southbound					I-10 Eastbound On Ramp Westbound					Cedar Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	2	0	2	0	4	0	10	10
07:15 AM	1	3	0	0	4	0	0	0	0	0	0	4	1	0	5	0	0	1	1	1	1	10	11
07:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	3	1	5	3	0	5	0	8	1	15	16
07:45 AM	1	1	0	0	2	0	0	0	0	0	0	4	0	0	4	4	0	2	0	6	0	12	12
Total	2	6	0	0	8	0	0	0	0	0	0	16	4	1	20	9	0	10	1	19	2	47	49
08:00 AM	0	5	0	0	5	0	0	0	0	0	0	5	1	0	6	3	0	3	0	6	0	17	17
08:15 AM	0	5	0	0	5	0	0	0	0	0	0	0	1	0	1	1	0	1	0	2	0	8	8
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	13	3	1	16	1	0	3	0	4	1	20	21
08:45 AM	1	5	0	0	6	0	0	0	0	0	0	2	1	0	3	0	0	6	1	6	1	15	16
Total	1	15	0	0	16	0	0	0	0	0	0	20	6	1	26	5	0	13	1	18	2	60	62
Grand Total	3	21	0	0	24	0	0	0	0	0	0	36	10	2	46	14	0	23	2	37	4	107	111
Apprch %	12.5	87.5	0			0	0	0			0	78.3	21.7			37.8	0	62.2					
Total %	2.8	19.6	0		22.4	0	0	0		0	0	33.6	9.3		43	13.1	0	21.5		34.6	3.6	96.4	

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	**6**	0	**6**	2	0	2	4	10
07:15 AM	**1**	**3**	0	**4**	0	0	0	0	0	4	1	5	0	0	1	1	10
07:30 AM	0	2	0	2	0	0	0	0	0	2	**3**	5	3	0	**5**	**8**	**15**
07:45 AM	1	1	0	2	0	0	0	0	0	4	0	4	**4**	0	2	6	12
Total Volume	2	6	0	8	0	0	0	0	0	16	4	20	9	0	10	19	47
% App. Total	25	75	0		0	0	0		0	80	20		47.4	0	52.6		
PHF	.500	.500	.000	.500	.000	.000	.000	.000	.000	.667	.333	.833	.563	.000	.500	.594	.783

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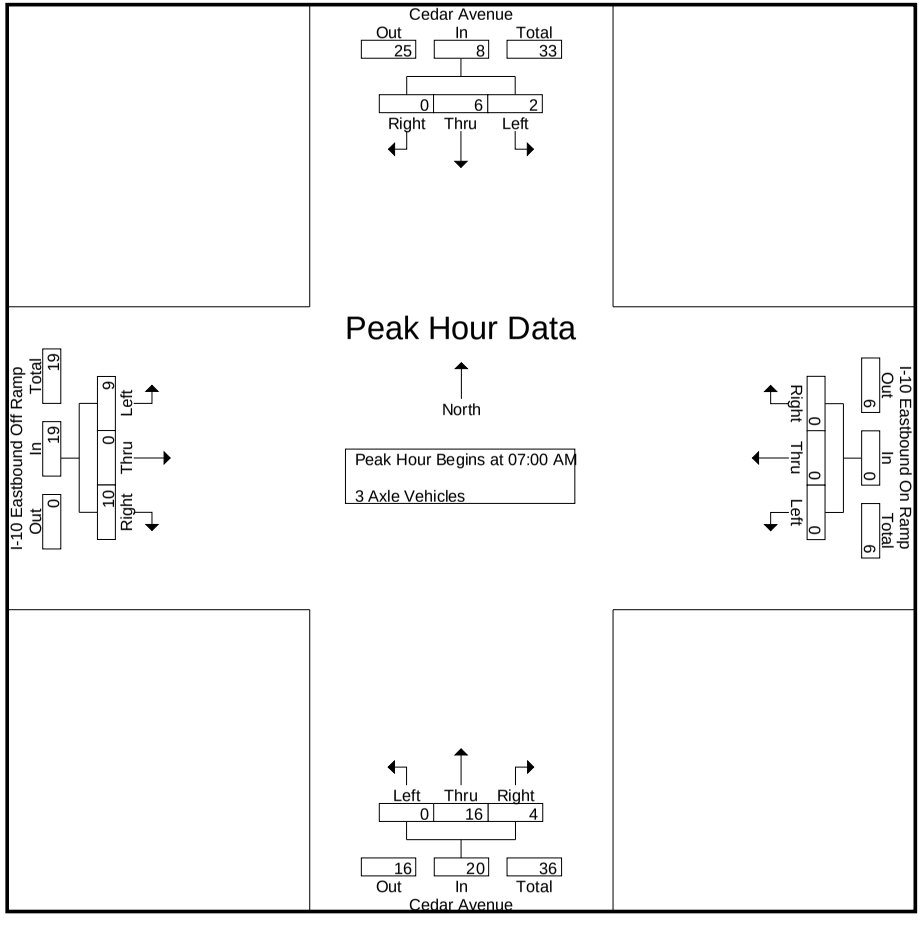
City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	**6**	0	**6**	2	0	2	4	
+15 mins.	**1**	**3**	0	**4**	0	0	0	0	0	4	1	5	0	0	1	1	
+30 mins.	0	2	0	2	0	0	0	0	0	2	**3**	5	3	0	**5**	**8**	
+45 mins.	1	1	0	2	0	0	0	0	0	4	0	4	**4**	0	2	6	
Total Volume	2	6	0	8	0	0	0	0	0	16	4	20	9	0	10	19	
% App. Total	25	75	0		0	0	0		0	80	20		47.4	0	52.6		
PHF	.500	.500	.000	.500	.000	.000	.000	.000	.000	.667	.333	.833	.563	.000	.500	.594	

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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

	Cedar Avenue Southbound					I-10 Eastbound On Ramp Westbound					Cedar Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	3	0	0	4	0	0	0	0	0	0	4	4	1	8	8	0	5	1	13	2	25	27
07:15 AM	1	7	0	0	8	0	0	0	0	0	0	9	3	1	12	6	0	2	0	8	1	28	29
07:30 AM	5	8	0	0	13	0	0	0	0	0	0	1	2	2	3	5	0	5	0	10	2	26	28
07:45 AM	4	5	0	0	9	0	0	0	0	0	0	8	6	2	14	4	0	8	1	12	3	35	38
Total	11	23	0	0	34	0	0	0	0	0	0	22	15	6	37	23	0	20	2	43	8	114	122
08:00 AM	0	10	0	0	10	0	0	0	0	0	0	4	4	2	8	6	0	8	0	14	2	32	34
08:15 AM	1	9	0	0	10	0	0	0	0	0	0	9	5	2	14	6	0	4	1	10	3	34	37
08:30 AM	2	8	0	0	10	0	0	0	0	0	0	16	4	0	20	6	0	4	0	10	0	40	40
08:45 AM	6	7	0	0	13	0	0	0	0	0	0	9	7	3	16	3	1	5	0	9	3	38	41
Total	9	34	0	0	43	0	0	0	0	0	0	38	20	7	58	21	1	21	1	43	8	144	152
Grand Total	20	57	0	0	77	0	0	0	0	0	0	60	35	13	95	44	1	41	3	86	16	258	274
Apprch %	26	74	0			0	0	0			0	63.2	36.8			51.2	1.2	47.7					
Total %	7.8	22.1	0		29.8	0	0	0		0	0	23.3	13.6		36.8	17.1	0.4	15.9		33.3	5.8	94.2	

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	3	0	4	0	0	0	0	0	4	4	8	**8**	0	5	**13**	25
07:15 AM	1	7	0	8	0	0	0	0	0	**9**	3	12	6	0	2	8	28
07:30 AM	**5**	**8**	0	**13**	0	0	0	0	0	1	2	3	5	0	5	10	26
07:45 AM	4	5	0	9	0	0	0	0	0	8	**6**	**14**	4	0	**8**	12	**35**
Total Volume	11	23	0	34	0	0	0	0	0	22	15	37	23	0	20	43	114
% App. Total	32.4	67.6	0		0	0	0		0	59.5	40.5		53.5	0	46.5		
PHF	.550	.719	.000	.654	.000	.000	.000	.000	.000	.611	.625	.661	.719	.000	.625	.827	.814

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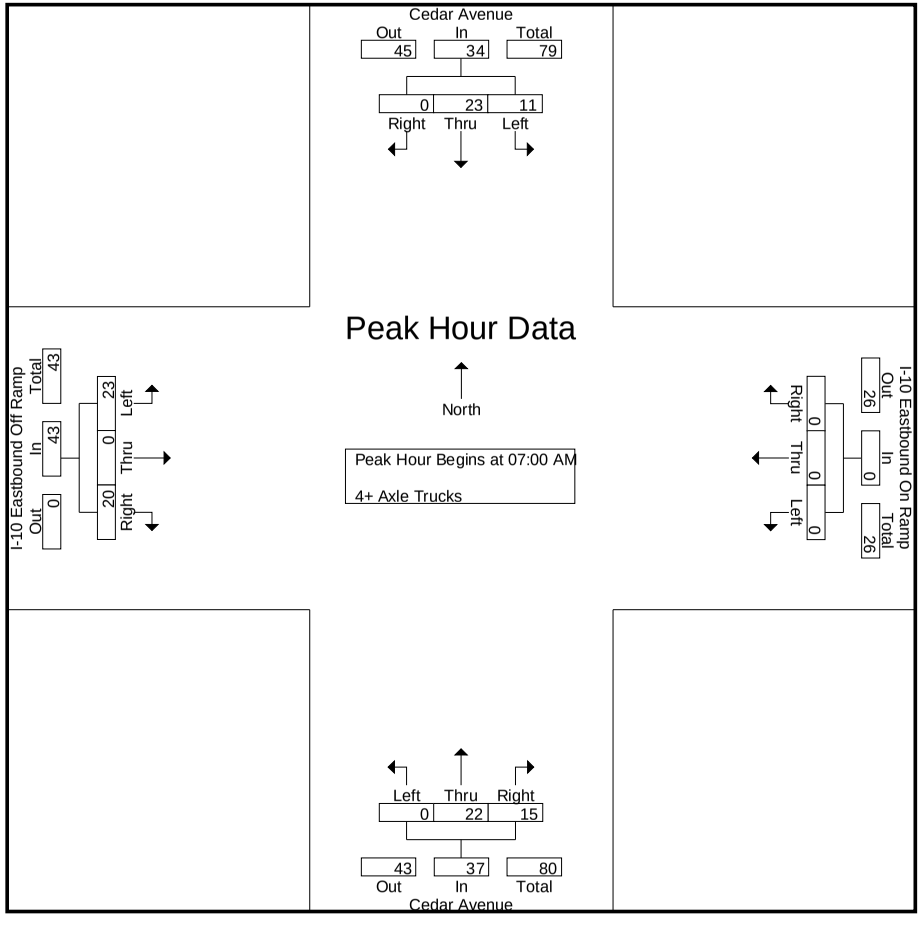
City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E AM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E AM
Site Code : 05121547
Start Date : 10/7/2021

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	1	3	0	4	0	0	0	0	0	4	4	8	**8**	0	5	**13**	
+15 mins.	1	7	0	8	0	0	0	0	0	**9**	3	12	6	0	2	8	
+30 mins.	**5**	**8**	0	**13**	0	0	0	0	0	1	2	3	5	0	5	10	
+45 mins.	4	5	0	9	0	0	0	0	0	8	**6**	**14**	4	0	**8**	12	
Total Volume	11	23	0	34	0	0	0	0	0	22	15	37	23	0	20	43	
% App. Total	32.4	67.6	0		0	0	0		0	59.5	40.5		53.5	0	46.5		
PHF	.550	.719	.000	.654	.000	.000	.000	.000	.000	.611	.625	.661	.719	.000	.625	.827	

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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Cedar Avenue Southbound					I-10 Eastbound On Ramp Westbound					Cedar Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	70	214	0	0	284	0	0	0	0	0	0	215	91	39	306	132	3	22	1	157	40	747	787
04:15 PM	99	260	0	0	359	0	0	0	0	0	0	234	68	32	302	115	0	25	0	140	32	801	833
04:30 PM	94	243	0	0	337	0	0	0	0	0	0	213	81	48	294	144	3	48	5	195	53	826	879
04:45 PM	87	233	0	0	320	0	0	0	0	0	0	203	61	31	264	121	2	23	1	146	32	730	762
Total	350	950	0	0	1300	0	0	0	0	0	0	865	301	150	1166	512	8	118	7	638	157	3104	3261
05:00 PM	87	223	0	0	310	0	0	0	0	0	0	210	72	37	282	124	2	33	1	159	38	751	789
05:15 PM	94	240	0	0	334	0	0	0	0	0	0	228	93	44	321	118	0	33	5	151	49	806	855
05:30 PM	69	234	0	0	303	0	0	0	0	0	0	164	52	16	216	134	0	12	1	146	17	665	682
05:45 PM	87	247	0	0	334	0	0	0	0	0	0	233	92	35	325	131	1	19	0	151	35	810	845
Total	337	944	0	0	1281	0	0	0	0	0	0	835	309	132	1144	507	3	97	7	607	139	3032	3171
Grand Total	687	1894	0	0	2581	0	0	0	0	0	0	1700	610	282	2310	1019	11	215	14	1245	296	6136	6432
Apprch %	26.6	73.4	0			0	0	0			0	73.6	26.4			81.8	0.9	17.3					
Total %	11.2	30.9	0		42.1	0	0	0		0	0	27.7	9.9		37.6	16.6	0.2	3.5		20.3	4.6	95.4	
Passenger Vehicles	666	1749	0		2415	0	0	0		0	0	1594	574		2437	960	10	166		1148	0	0	6000
% Passenger Vehicles	96.9	92.3	0	0	93.6	0	0	0	0	0	0	93.8	94.1	95.4	94	94.2	90.9	77.2	85.7	91.2	0	0	93.3
Large 2 Axle Vehicles	11	66	0		77	0	0	0		0	0	45	14		64	20	1	17		40	0	0	181
% Large 2 Axle Vehicles	1.6	3.5	0	0	3	0	0	0	0	0	0	2.6	2.3	1.8	2.5	2	9.1	7.9	14.3	3.2	0	0	2.8
3 Axle Vehicles	2	34	0		36	0	0	0		0	0	11	6		21	13	0	8		21	0	0	78
% 3 Axle Vehicles	0.3	1.8	0	0	1.4	0	0	0	0	0	0	0.6	1	1.4	0.8	1.3	0	3.7	0	1.7	0	0	1.2
4+ Axle Trucks	8	45	0		53	0	0	0		0	0	50	16		70	26	0	24		50	0	0	173
% 4+ Axle Trucks	1.2	2.4	0	0	2.1	0	0	0	0	0	0	2.9	2.6	1.4	2.7	2.6	0	11.2	0	4	0	0	2.7

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**94**	**243**	0	**337**	0	0	0	0	0	213	81	294	**144**	**3**	**48**	**195**	**826**
04:45 PM	87	233	0	320	0	0	0	0	0	203	61	264	121	2	23	146	730
05:00 PM	87	223	0	310	0	0	0	0	0	210	72	282	124	2	33	159	751
05:15 PM	94	240	0	334	0	0	0	0	0	**228**	**93**	**321**	118	0	33	151	806
Total Volume	362	939	0	1301	0	0	0	0	0	854	307	1161	507	7	137	651	3113
% App. Total	27.8	72.2	0		0	0	0		0	73.6	26.4		77.9	1.1	21		
PHF	.963	.966	.000	.965	.000	.000	.000	.000	.000	.936	.825	.904	.880	.583	.714	.835	.942

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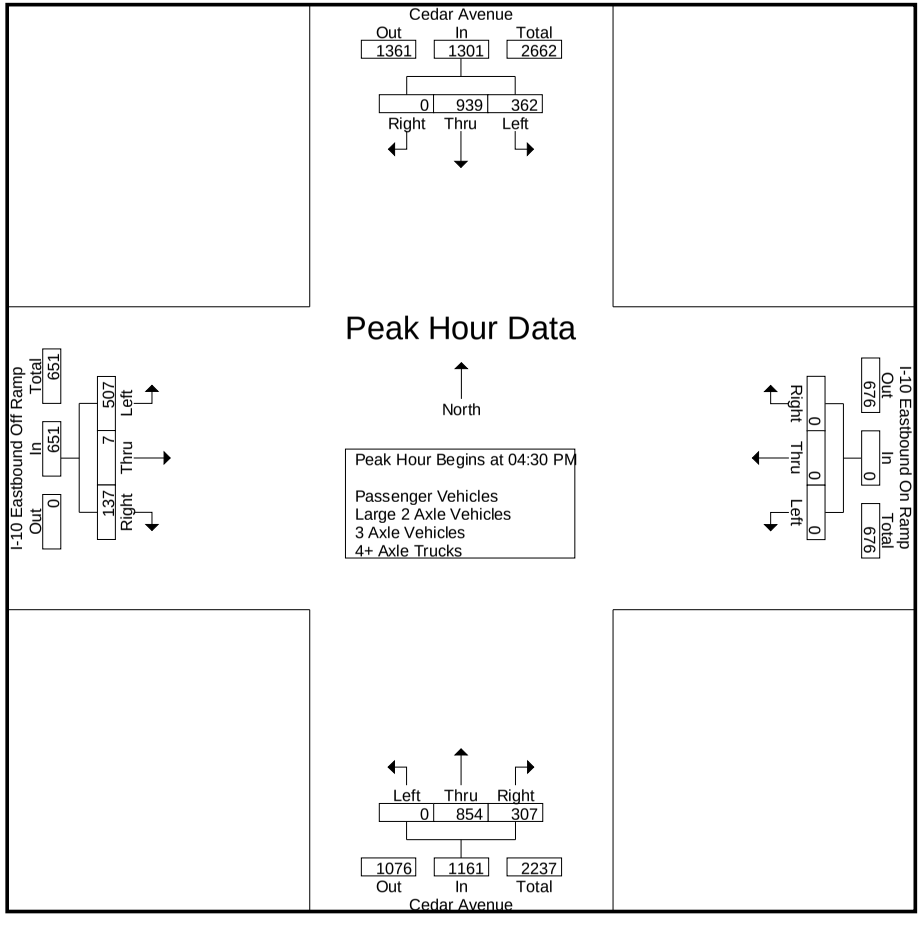
City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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File Name : 07_RLT_CE_10E PM
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Start Date : 10/7/2021

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:00 PM				04:00 PM				04:30 PM				
+0 mins.	**99**	**260**	0	**359**	0	0	0	0	0	215	**91**	**306**	**144**	**3**	**48**	**195**	
+15 mins.	94	243	0	337	0	0	0	0	0	**234**	68	302	121	2	23	146	
+30 mins.	87	233	0	320	0	0	0	0	0	213	81	294	124	2	33	159	
+45 mins.	87	223	0	310	0	0	0	0	0	203	61	264	118	0	33	151	
Total Volume	367	959	0	1326	0	0	0	0	0	865	301	1166	507	7	137	651	
% App. Total	27.7	72.3	0		0	0	0		0	74.2	25.8		77.9	1.1	21		
PHF	.927	.922	.000	.923	.000	.000	.000	.000	.000	.924	.827	.953	.880	.583	.714	.835	

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File Name : 07_RLT_CE_10E PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Passenger Vehicles

	Cedar Avenue Southbound					I-10 Eastbound On Ramp Westbound					Cedar Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	66	199	0	0	265	0	0	0	0	0	0	202	87	37	289	125	2	18	1	145	38	699	737
04:15 PM	96	237	0	0	333	0	0	0	0	0	0	217	66	31	283	107	0	18	0	125	31	741	772
04:30 PM	91	213	0	0	304	0	0	0	0	0	0	199	74	45	273	134	3	40	5	177	50	754	804
04:45 PM	84	222	0	0	306	0	0	0	0	0	0	191	59	31	250	116	2	18	1	136	32	692	724
Total	337	871	0	0	1208	0	0	0	0	0	0	809	286	144	1095	482	7	94	7	583	151	2886	3037
05:00 PM	84	206	0	0	290	0	0	0	0	0	0	202	67	35	269	118	2	22	0	142	35	701	736
05:15 PM	94	222	0	0	316	0	0	0	0	0	0	210	86	40	296	112	0	24	4	136	44	748	792
05:30 PM	67	216	0	0	283	0	0	0	0	0	0	152	49	15	201	125	0	11	1	136	16	620	636
05:45 PM	84	234	0	0	318	0	0	0	0	0	0	221	86	35	307	123	1	15	0	139	35	764	799
Total	329	878	0	0	1207	0	0	0	0	0	0	785	288	125	1073	478	3	72	5	553	130	2833	2963
Grand Total	666	1749	0	0	2415	0	0	0	0	0	0	1594	574	269	2168	960	10	166	12	1136	281	5719	6000
Apprch %	27.6	72.4	0			0	0	0			0	73.5	26.5			84.5	0.9	14.6					
Total %	11.6	30.6	0		42.2	0	0	0		0	0	27.9	10		37.9	16.8	0.2	2.9		19.9	4.7	95.3	

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	91	213	0	304	0	0	0	0	0	199	74	273	**134**	**3**	**40**	**177**	**754**
04:45 PM	84	**222**	0	306	0	0	0	0	0	191	59	250	116	2	18	136	692
05:00 PM	84	206	0	290	0	0	0	0	0	202	67	269	118	2	22	142	701
05:15 PM	**94**	222	0	**316**	0	0	0	0	0	**210**	**86**	**296**	112	0	24	136	748
Total Volume	353	863	0	1216	0	0	0	0	0	802	286	1088	480	7	104	591	2895
% App. Total	29	71	0		0	0	0		0	73.7	26.3		81.2	1.2	17.6		
PHF	.939	.972	.000	.962	.000	.000	.000	.000	.000	.955	.831	.919	.896	.583	.650	.835	.960

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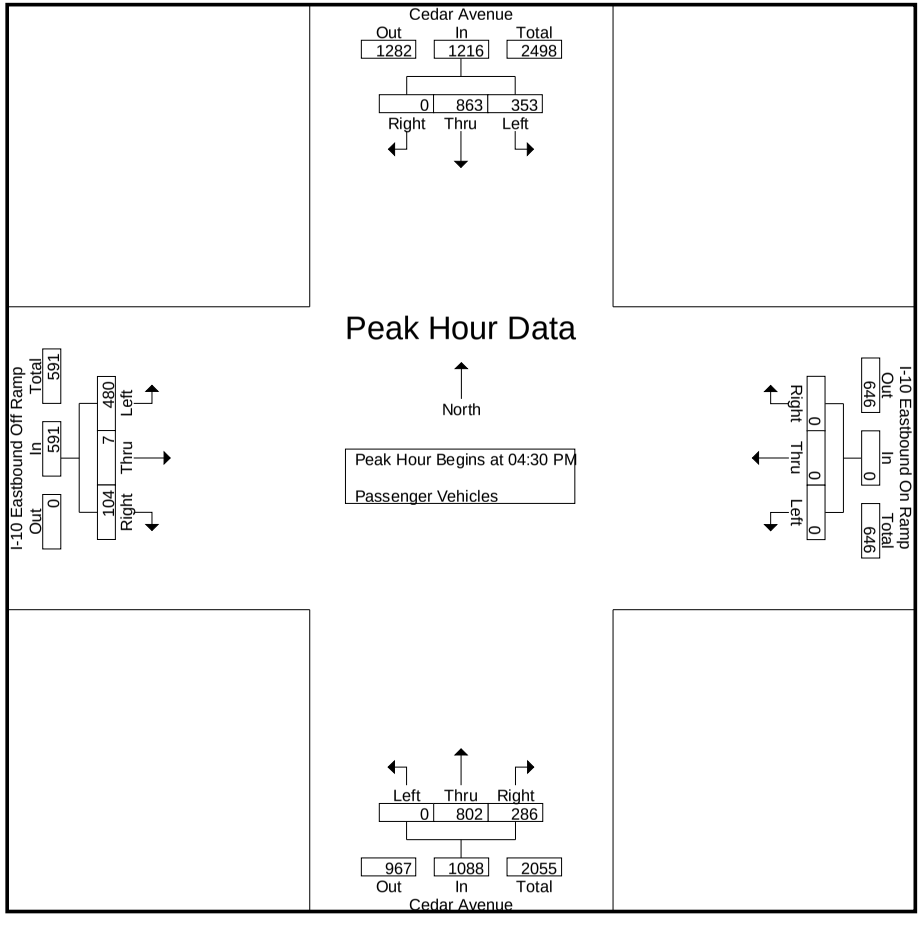
City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
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File Name : 07_RLT_CE_10E PM
Site Code : 05121547
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	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	91	213	0	304	0	0	0	0	0	199	74	273	**134**	**3**	**40**	**177**	
+15 mins.	84	**222**	0	306	0	0	0	0	0	191	59	250	116	2	18	136	
+30 mins.	84	206	0	290	0	0	0	0	0	202	67	269	118	2	22	142	
+45 mins.	**94**	222	0	**316**	0	0	0	0	0	**210**	**86**	**296**	112	0	24	136	
Total Volume	353	863	0	1216	0	0	0	0	0	802	286	1088	480	7	104	591	
% App. Total	29	71	0		0	0	0		0	73.7	26.3		81.2	1.2	17.6		
PHF	.939	.972	.000	.962	.000	.000	.000	.000	.000	.955	.831	.919	.896	.583	.650	.835	

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City of Rialto
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File Name : 07_RLT_CE_10E PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Cedar Avenue Southbound					I-10 Eastbound On Ramp Westbound					Cedar Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	2	10	0	0	12	0	0	0	0	0	0	2	2	1	4	1	1	2	0	4	1	20	21
04:15 PM	1	11	0	0	12	0	0	0	0	0	0	10	1	1	11	4	0	2	0	6	1	29	30
04:30 PM	1	10	0	0	11	0	0	0	0	0	0	4	4	2	8	5	0	4	0	9	2	28	30
04:45 PM	2	5	0	0	7	0	0	0	0	0	0	7	1	0	8	1	0	1	0	2	0	17	17
Total	6	36	0	0	42	0	0	0	0	0	0	23	8	4	31	11	1	9	0	21	4	94	98
05:00 PM	2	7	0	0	9	0	0	0	0	0	0	4	2	0	6	2	0	2	1	4	1	19	20
05:15 PM	0	9	0	0	9	0	0	0	0	0	0	6	3	1	9	2	0	5	1	7	2	25	27
05:30 PM	1	8	0	0	9	0	0	0	0	0	0	6	0	0	6	2	0	0	0	2	0	17	17
05:45 PM	2	6	0	0	8	0	0	0	0	0	0	6	1	0	7	3	0	1	0	4	0	19	19
Total	5	30	0	0	35	0	0	0	0	0	0	22	6	1	28	9	0	8	2	17	3	80	83
Grand Total	11	66	0	0	77	0	0	0	0	0	0	45	14	5	59	20	1	17	2	38	7	174	181
Apprch %	14.3	85.7	0			0	0	0			0	76.3	23.7			52.6	2.6	44.7					
Total %	6.3	37.9	0		44.3	0	0	0		0	0	25.9	8		33.9	11.5	0.6	9.8		21.8	3.9	96.1	

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	**10**	0	**11**	0	0	0	0	0	4	**4**	8	**5**	0	4	**9**	**28**
04:45 PM	**2**	5	0	7	0	0	0	0	0	**7**	1	8	1	0	1	2	17
05:00 PM	2	7	0	9	0	0	0	0	0	4	2	6	2	0	2	4	19
05:15 PM	0	9	0	9	0	0	0	0	0	6	3	**9**	2	0	**5**	7	25
Total Volume	5	31	0	36	0	0	0	0	0	21	10	31	10	0	12	22	89
% App. Total	13.9	86.1	0		0	0	0		0	67.7	32.3		45.5	0	54.5		
PHF	.625	.775	.000	.818	.000	.000	.000	.000	.000	.750	.625	.861	.500	.000	.600	.611	.795

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City of Rialto
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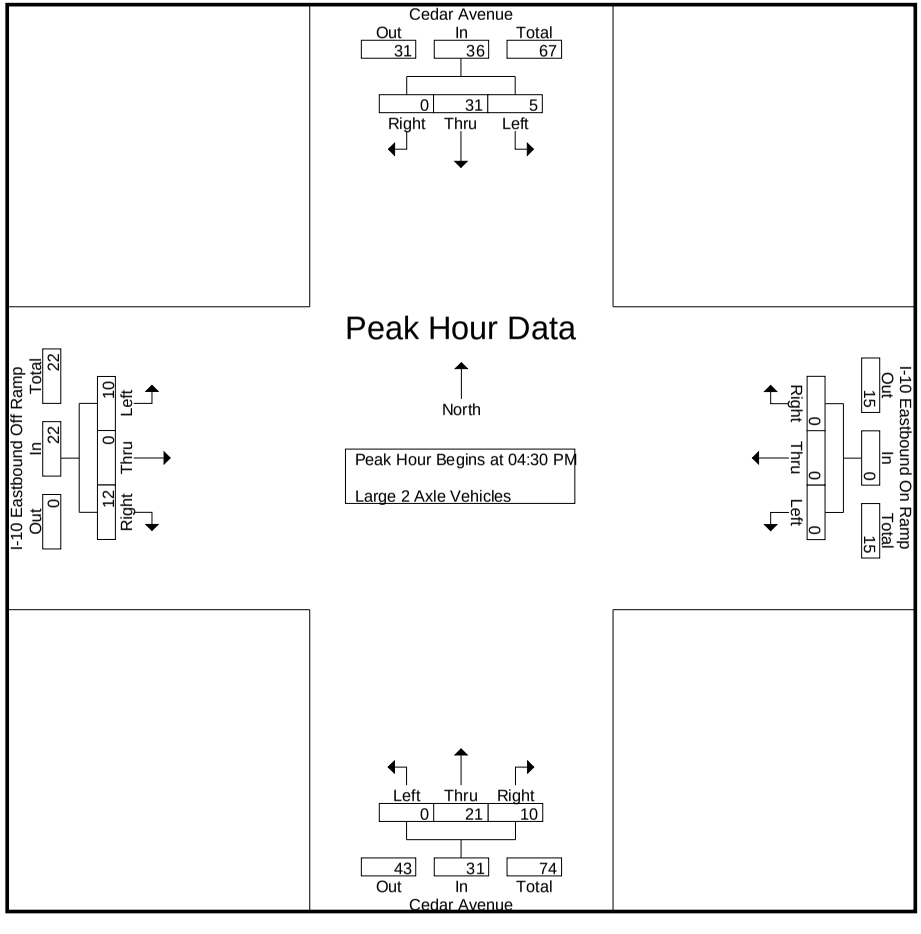

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Start Date : 10/7/2021
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	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	1	**10**	0	**11**	0	0	0	0	0	4	**4**	8	**5**	0	4	**9**	
+15 mins.	**2**	5	0	7	0	0	0	0	0	**7**	1	8	1	0	1	2	
+30 mins.	2	7	0	9	0	0	0	0	0	4	2	6	2	0	2	4	
+45 mins.	0	9	0	9	0	0	0	0	0	6	3	**9**	2	0	**5**	7	
Total Volume	5	31	0	36	0	0	0	0	0	21	10	31	10	0	12	22	
% App. Total	13.9	86.1	0		0	0	0		0	67.7	32.3		45.5	0	54.5		
PHF	.625	.775	.000	.818	.000	.000	.000	.000	.000	.750	.625	.861	.500	.000	.600	.611	

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File Name : 07_RLT_CE_10E PM
Site Code : 05121547
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Page No : 1

Groups Printed- 3 Axle Vehicles

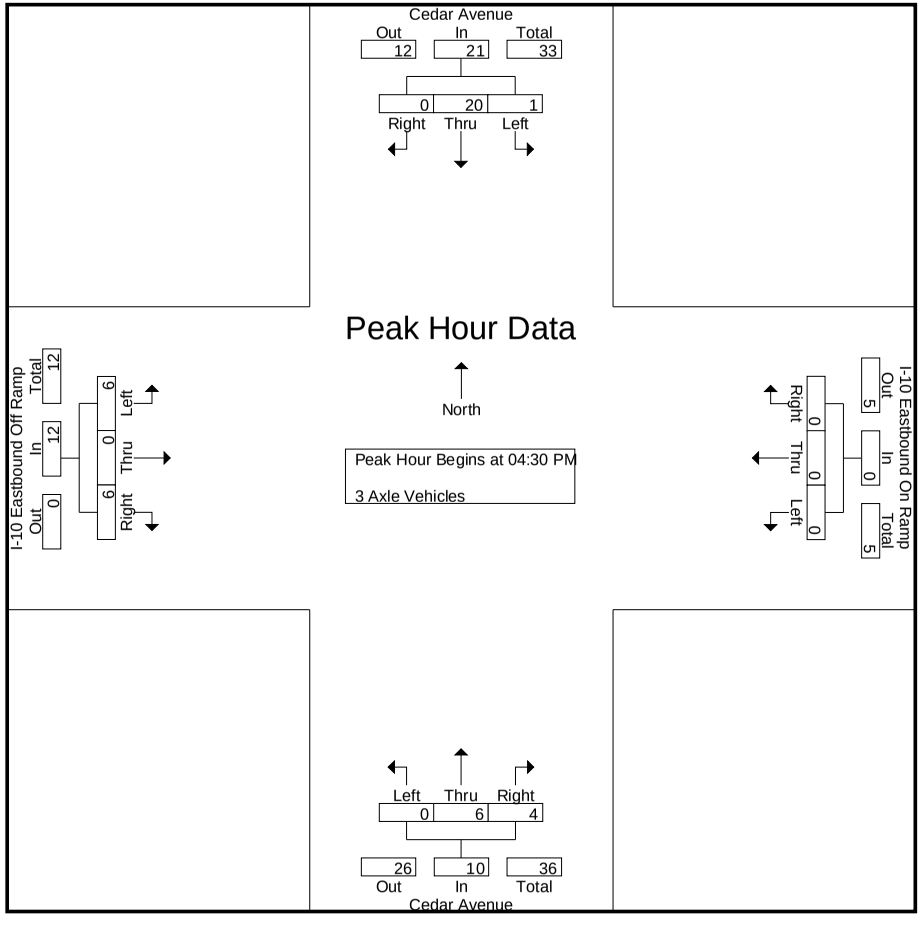
	Cedar Avenue Southbound					I-10 Eastbound On Ramp Westbound					Cedar Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	2	0	0	2	0	0	0	0	0	0	1	1	1	2	1	0	0	0	1	1	5	6
04:15 PM	1	6	0	0	7	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	9	9
04:30 PM	0	11	0	0	11	0	0	0	0	0	0	3	1	0	4	2	0	2	0	4	0	19	19
04:45 PM	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	2	0	1	0	3	0	7	7
Total	1	22	0	0	23	0	0	0	0	0	0	5	3	1	8	5	0	4	0	9	1	40	41
05:00 PM	1	4	0	0	5	0	0	0	0	0	0	0	1	1	1	0	0	3	0	3	1	9	10
05:15 PM	0	2	0	0	2	0	0	0	0	0	0	3	1	1	4	2	0	0	0	2	1	8	9
05:30 PM	0	4	0	0	4	0	0	0	0	0	0	2	1	1	3	2	0	0	0	2	1	9	10
05:45 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	4	0	1	0	5	0	8	8
Total	1	12	0	0	13	0	0	0	0	0	0	6	3	3	9	8	0	4	0	12	3	34	37
Grand Total	2	34	0	0	36	0	0	0	0	0	0	11	6	4	17	13	0	8	0	21	4	74	78
Apprch %	5.6	94.4	0			0	0	0			0	64.7	35.3			61.9	0	38.1					
Total %	2.7	45.9	0		48.6	0	0	0		0	0	14.9	8.1		23	17.6	0	10.8		28.4	5.1	94.9	

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**11**	0	**11**	0	0	0	0	0	**3**	**1**	**4**	**2**	0	2	**4**	**19**
04:45 PM	0	3	0	3	0	0	0	0	0	0	1	1	2	0	1	3	7
05:00 PM	**1**	4	0	5	0	0	0	0	0	0	1	1	0	0	**3**	3	9
05:15 PM	0	2	0	2	0	0	0	0	0	3	1	4	2	0	0	2	8
Total Volume	1	20	0	21	0	0	0	0	0	6	4	10	6	0	6	12	43
% App. Total	4.8	95.2	0		0	0	0		0	60	40		50	0	50		
PHF	.250	.455	.000	.477	.000	.000	.000	.000	.000	.500	1.00	.625	.750	.000	.500	.750	.566

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E PM
Site Code : 05121547
Start Date : 10/7/2021

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	**11**	0	**11**	0	0	0	0	0	**3**	**1**	**4**	**2**	0	2	**4**	
+15 mins.	0	3	0	3	0	0	0	0	0	0	1	1	2	0	1	3	
+30 mins.	**1**	4	0	5	0	0	0	0	0	0	1	1	0	0	**3**	3	
+45 mins.	0	2	0	2	0	0	0	0	0	3	1	4	2	0	0	2	
Total Volume	1	20	0	21	0	0	0	0	0	6	4	10	6	0	6	12	
% App. Total	4.8	95.2	0		0	0	0		0	60	40		50	0	50		
PHF	.250	.455	.000	.477	.000	.000	.000	.000	.000	.500	1.000	.625	.750	.000	.500	.750	

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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

	Cedar Avenue Southbound					I-10 Eastbound On Ramp Westbound					Cedar Avenue Northbound					I-10 Eastbound Off Ramp Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	2	3	0	0	5	0	0	0	0	0	0	10	1	0	11	5	0	2	0	7	0	23	23
04:15 PM	1	6	0	0	7	0	0	0	0	0	0	6	1	0	7	4	0	4	0	8	0	22	22
04:30 PM	2	9	0	0	11	0	0	0	0	0	0	7	2	1	9	3	0	2	0	5	1	25	26
04:45 PM	1	3	0	0	4	0	0	0	0	0	0	5	0	0	5	2	0	3	0	5	0	14	14
Total	6	21	0	0	27	0	0	0	0	0	0	28	4	1	32	14	0	11	0	25	1	84	85
05:00 PM	0	6	0	0	6	0	0	0	0	0	0	4	2	1	6	4	0	6	0	10	1	22	23
05:15 PM	0	7	0	0	7	0	0	0	0	0	0	9	3	2	12	2	0	4	0	6	2	25	27
05:30 PM	1	6	0	0	7	0	0	0	0	0	0	4	2	0	6	5	0	1	0	6	0	19	19
05:45 PM	1	5	0	0	6	0	0	0	0	0	0	5	5	0	10	1	0	2	0	3	0	19	19
Total	2	24	0	0	26	0	0	0	0	0	0	22	12	3	34	12	0	13	0	25	3	85	88
Grand Total	8	45	0	0	53	0	0	0	0	0	0	50	16	4	66	26	0	24	0	50	4	169	173
Apprch %	15.1	84.9	0			0	0	0			0	75.8	24.2			52	0	48					
Total %	4.7	26.6	0		31.4	0	0	0		0	0	29.6	9.5		39.1	15.4	0	14.2		29.6	2.3	97.7	

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**2**	**9**	0	**11**	0	0	0	0	0	7	2	9	3	0	2	5	**25**
04:45 PM	1	3	0	4	0	0	0	0	0	5	0	5	2	0	3	5	14
05:00 PM	0	6	0	6	0	0	0	0	0	4	2	6	**4**	0	**6**	**10**	22
05:15 PM	0	7	0	7	0	0	0	0	0	**9**	**3**	**12**	2	0	4	6	25
Total Volume	3	25	0	28	0	0	0	0	0	25	7	32	11	0	15	26	86
% App. Total	10.7	89.3	0		0	0	0		0	78.1	21.9		42.3	0	57.7		
PHF	.375	.694	.000	.636	.000	.000	.000	.000	.000	.694	.583	.667	.688	.000	.625	.650	.860

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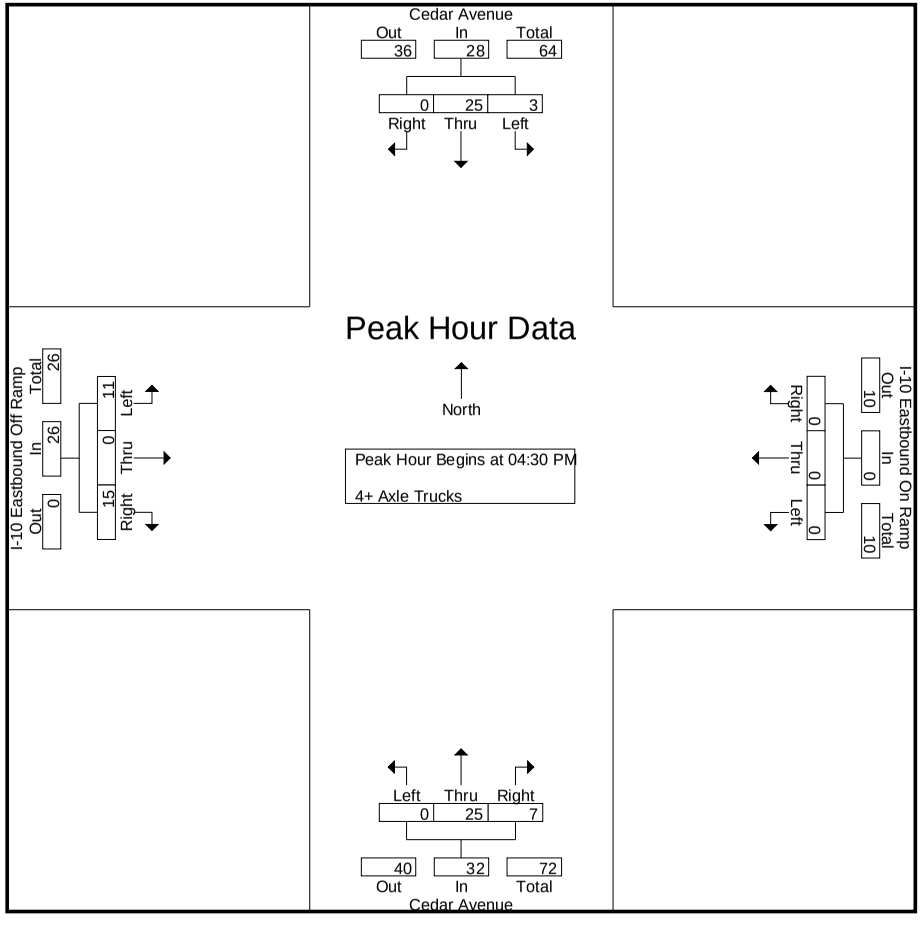
City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 07_RLT_CE_10E PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 2



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City of Rialto
N/S: Cedar Avenue
E/W: I-10 Eastbound Ramps
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File Name : 07_RLT_CE_10E PM
Site Code : 05121547
Start Date : 10/7/2021
Page No : 3

	Cedar Avenue Southbound				I-10 Eastbound On Ramp Westbound				Cedar Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	**2**	**9**	0	**11**	0	0	0	0	0	7	2	9	3	0	2	5	
+15 mins.	1	3	0	4	0	0	0	0	0	5	0	5	2	0	3	5	
+30 mins.	0	6	0	6	0	0	0	0	0	4	2	6	**4**	0	**6**	**10**	
+45 mins.	0	7	0	7	0	0	0	0	0	**9**	**3**	**12**	2	0	4	6	
Total Volume	3	25	0	28	0	0	0	0	0	25	7	32	11	0	15	26	
% App. Total	10.7	89.3	0		0	0	0		0	78.1	21.9		42.3	0	57.7		
PHF	.375	.694	.000	.636	.000	.000	.000	.000	.000	.694	.583	.667	.688	.000	.625	.650	

Location: Rialto
N/S: Cedar Avenue
E/W: I-10 EB Ramps

Date: 10/7/2021
Day: Thursday

PEDESTRIANS

	North Leg Cedar Avenue	East Leg I-10 EB Ramps	South Leg Cedar Avenue	West Leg I-10 EB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	1	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	1	0	0	1
8:00 AM	0	0	0	1	1
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	3	0	1	4
TOTAL VOLUMES:	0	5	0	2	7

	North Leg Cedar Avenue	East Leg I-10 EB Ramps	South Leg Cedar Avenue	West Leg I-10 EB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	1	0	0	1	2
4:45 PM	0	0	0	1	1
5:00 PM	0	0	0	0	0
5:15 PM	0	2	0	0	2
5:30 PM	0	2	0	0	2
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	4	0	2	7

Counts Unlimited, Inc.
PO Box 1178
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951-268-6268

Location: Rialto
N/S: Cedar Avenue
E/W: I-10 EB Ramps

Date: 10/7/2021
Day: Thursday

BICYCLES

	Southbound Cedar Avenue			Westbound I-10 EB Ramps			Northbound Cedar Avenue			Eastbound I-10 EB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

	Southbound Cedar Avenue			Westbound I-10 EB Ramps			Northbound Cedar Avenue			Eastbound I-10 EB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	0	0	0	0	2	0	0	0	0	4

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City of Rialto
Cedar Avenue
N/ Durst Drive
24 Hour Directional Classification Count

RLT001
Site Code: 051-21547

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/07/21	0	134	9	0	1	5	0	0	1	0	2	0	0	152
01:00	1	132	21	0	1	0	0	0	6	0	1	0	0	162
02:00	0	93	9	0	0	3	0	0	1	0	**4**	0	0	110
03:00	0	134	23	0	1	2	0	0	6	**1**	2	0	0	169
04:00	1	266	32	1	2	6	0	1	6	0	0	0	0	315
05:00	**3**	366	75	0	7	10	0	0	12	0	1	0	0	474
06:00	1	451	106	**3**	8	5	0	3	19	0	1	0	0	597
07:00	2	**712**	**135**	3	22	9	0	5	12	0	0	0	0	**900**
08:00	1	574	110	0	24	7	0	3	15	0	1	0	0	735
09:00	0	489	111	0	**28**	6	0	7	**25**	0	1	0	0	667
10:00	0	479	120	1	23	9	0	7	17	0	0	0	0	656
11:00	0	543	128	1	19	**13**	0	**8**	20	0	4	0	0	736
12 PM	1	606	124	0	14	10	0	6	**26**	0	2	0	0	789
13:00	1	627	113	**4**	14	7	0	**15**	16	0	**3**	0	0	800
14:00	0	756	144	0	**22**	**11**	0	7	18	0	3	0	0	961
15:00	1	811	131	1	10	7	0	3	17	0	0	0	0	981
16:00	2	857	**171**	2	10	9	0	5	15	0	0	0	0	**1071**
17:00	2	**872**	142	0	13	2	0	4	14	0	0	0	0	1049
18:00	1	789	124	0	11	2	0	3	15	0	0	0	0	945
19:00	**4**	676	76	0	3	6	0	0	9	0	0	0	0	774
20:00	3	522	41	0	3	4	0	1	5	0	0	0	0	579
21:00	4	392	31	0	1	2	0	0	4	0	2	0	0	436
22:00	0	293	27	0	1	1	0	0	8	0	0	0	0	330
23:00	0	220	15	0	0	0	0	0	3	0	0	0	0	238
Total	28	11794	2018	16	238	136	0	78	290	1	27	0	0	14626
Percent	0.2%	80.6%	13.8%	0.1%	1.6%	0.9%	0.0%	0.5%	2.0%	0.0%	0.2%	0.0%	0.0%	
AM Peak	05:00	07:00	07:00	06:00	09:00	11:00		11:00	09:00	03:00	02:00			07:00
Vol.	3	712	135	3	28	13		8	25	1	4			900
PM Peak	19:00	17:00	16:00	13:00	14:00	14:00		13:00	12:00		13:00			16:00
Vol.	4	872	171	4	22	11		15	26		3			1071
Grand Total	28	11794	2018	16	238	136	0	78	290	1	27	0	0	14626
Percent	0.2%	80.6%	13.8%	0.1%	1.6%	0.9%	0.0%	0.5%	2.0%	0.0%	0.2%	0.0%	0.0%	

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City of Rialto
Cedar Avenue
N/ Durst Drive
24 Hour Directional Classification Count

RLT001
Site Code: 051-21547

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/07/21	0	119	3	0	1	0	0	0	5	0	0	0	0	128
01:00	0	102	2	0	0	0	0	1	1	0	0	0	0	106
02:00	0	123	1	0	0	0	0	0	3	0	0	0	0	127
03:00	0	193	7	0	3	1	0	0	6	0	0	0	0	210
04:00	0	417	17	0	6	3	0	1	12	0	2	0	0	458
05:00	0	533	46	0	4	3	0	0	12	0	0	0	0	598
06:00	1	599	84	0	15	6	0	1	12	0	1	0	0	719
07:00	1	**768**	**130**	3	13	11	0	2	18	0	1	0	0	947
08:00	2	757	123	**5**	**24**	**14**	0	2	**26**	0	1	0	0	**954**
09:00	**3**	504	112	1	18	11	0	3	21	0	**3**	0	0	676
10:00	0	475	113	1	18	8	0	3	20	0	0	0	0	638
11:00	1	516	130	3	17	10	0	**5**	18	0	0	0	0	700
12 PM	1	595	113	0	21	11	0	3	**18**	0	**3**	0	0	765
13:00	**2**	636	124	2	21	9	**1**	10	12	0	2	0	0	819
14:00	0	694	**177**	3	18	3	0	10	12	0	3	0	0	920
15:00	2	**795**	170	**4**	22	**14**	0	**12**	14	0	1	0	0	**1034**
16:00	2	747	151	1	**23**	11	0	3	11	0	1	0	0	950
17:00	2	785	132	0	10	8	0	10	10	0	0	0	0	957
18:00	1	662	111	0	8	3	0	2	11	0	1	0	0	799
19:00	0	584	54	0	5	1	0	4	6	0	0	0	0	654
20:00	0	529	42	0	0	0	0	1	11	0	0	0	0	583
21:00	0	383	33	0	1	1	0	2	3	0	1	0	0	424
22:00	0	280	17	0	3	4	0	1	5	0	3	0	0	313
23:00	1	168	10	0	2	1	0	1	1	0	0	0	0	184
Total	19	11964	1902	23	253	133	1	77	268	0	23	0	0	14663
Percent	0.1%	81.6%	13.0%	0.2%	1.7%	0.9%	0.0%	0.5%	1.8%	0.0%	0.2%	0.0%	0.0%	
AM Peak	09:00	07:00	07:00	08:00	08:00	08:00		11:00	08:00		09:00			08:00
Vol.	3	768	130	5	24	14		5	26		3			954
PM Peak	13:00	15:00	14:00	15:00	16:00	15:00	13:00	15:00	12:00		12:00			15:00
Vol.	2	795	177	4	23	14	1	12	18		3			1034
Grand Total	19	11964	1902	23	253	133	1	77	268	0	23	0	0	14663
Percent	0.1%	81.6%	13.0%	0.2%	1.7%	0.9%	0.0%	0.5%	1.8%	0.0%	0.2%	0.0%	0.0%	

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City of Rialto
Cedar Avenue
N/ Durst Drive
24 Hour Directional Classification Count
Northbound, Southbound

RLT001
Site Code: 051-21547

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/07/21	0	253	12	0	2	5	0	0	6	0	2	0	0	280
01:00	1	234	23	0	1	0	0	1	7	0	1	0	0	268
02:00	0	216	10	0	0	3	0	0	4	0	**4**	0	0	237
03:00	0	327	30	0	4	3	0	0	12	**1**	2	0	0	379
04:00	1	683	49	1	8	9	0	2	18	0	2	0	0	773
05:00	**3**	899	121	0	11	13	0	0	24	0	1	0	0	1072
06:00	2	1050	190	3	23	11	0	4	31	0	2	0	0	1316
07:00	3	**1480**	**265**	**6**	35	20	0	7	30	0	1	0	0	**1847**
08:00	3	1331	233	5	**48**	21	0	5	41	0	2	0	0	1689
09:00	3	993	223	1	46	17	0	10	**46**	0	4	0	0	1343
10:00	0	954	233	2	41	17	0	10	37	0	0	0	0	1294
11:00	1	1059	258	4	36	**23**	0	**13**	38	0	4	0	0	1436
12 PM	2	1201	237	0	35	**21**	0	9	**44**	0	5	0	0	1554
13:00	3	1263	237	**6**	35	16	**1**	**25**	28	0	5	0	0	1619
14:00	0	1450	321	3	**40**	14	0	17	30	0	**6**	0	0	1881
15:00	3	1606	301	5	32	21	0	15	31	0	1	0	0	2015
16:00	**4**	1604	**322**	3	33	20	0	8	26	0	1	0	0	**2021**
17:00	4	**1657**	274	0	23	10	0	14	24	0	0	0	0	2006
18:00	2	1451	235	0	19	5	0	5	26	0	1	0	0	1744
19:00	4	1260	130	0	8	7	0	4	15	0	0	0	0	1428
20:00	3	1051	83	0	3	4	0	2	16	0	0	0	0	1162
21:00	4	775	64	0	2	3	0	2	7	0	3	0	0	860
22:00	0	573	44	0	4	5	0	1	13	0	3	0	0	643
23:00	1	388	25	0	2	1	0	1	4	0	0	0	0	422
Total	47	23758	3920	39	491	269	1	155	558	1	50	0	0	29289
Percent	0.2%	81.1%	13.4%	0.1%	1.7%	0.9%	0.0%	0.5%	1.9%	0.0%	0.2%	0.0%	0.0%	
AM Peak	05:00	07:00	07:00	07:00	08:00	11:00		11:00	09:00	03:00	02:00			07:00
Vol.	3	1480	265	6	48	23		13	46	1	4			1847
PM Peak	16:00	17:00	16:00	13:00	14:00	12:00	13:00	13:00	12:00		14:00			16:00
Vol.	4	1657	322	6	40	21	1	25	44		6			2021
Grand Total	47	23758	3920	39	491	269	1	155	558	1	50	0	0	29289
Percent	0.2%	81.1%	13.4%	0.1%	1.7%	0.9%	0.0%	0.5%	1.9%	0.0%	0.2%	0.0%	0.0%	

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City of Rialto
Valley Boulevard
E/ Cedar Avenue
24 Hour Directional Classification Count

RLT002
Site Code: 051-21547

Eastbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/07/21	0	51	1	1	0	1	0	1	3	0	0	0	0	58
01:00	0	25	6	0	0	0	0	2	1	0	0	0	0	34
02:00	0	36	2	0	0	0	0	0	0	0	0	0	0	38
03:00	0	27	1	0	0	3	0	1	2	0	**1**	0	0	35
04:00	0	40	7	0	2	0	0	0	1	0	0	0	0	50
05:00	1	108	14	0	7	2	0	0	2	0	0	0	0	134
06:00	0	142	18	0	6	5	**1**	0	4	0	0	0	0	176
07:00	0	**362**	44	**2**	7	**8**	0	1	5	0	0	0	0	429
08:00	0	300	39	1	10	4	0	0	11	0	0	0	0	365
09:00	0	285	54	1	13	4	0	**4**	8	0	0	0	0	369
10:00	**3**	338	63	0	17	6	0	1	7	0	0	0	0	435
11:00	0	336	**81**	0	**18**	5	0	1	**12**	0	0	0	0	**453**
12 PM	0	374	76	0	10	3	0	1	9	0	0	0	0	473
13:00	**1**	406	78	0	**19**	**9**	0	**2**	10	0	0	0	0	525
14:00	1	445	77	0	17	6	0	2	**12**	0	0	0	0	560
15:00	0	482	90	**4**	12	3	0	1	4	0	0	0	0	596
16:00	0	**563**	**98**	2	12	4	0	1	11	0	0	0	0	**691**
17:00	0	503	93	1	7	4	0	0	7	0	0	0	0	615
18:00	1	349	61	0	5	5	0	0	7	0	0	0	0	428
19:00	1	251	47	0	2	4	0	0	6	0	0	0	0	311
20:00	1	216	41	0	0	2	0	0	2	0	0	0	0	262
21:00	0	154	26	0	2	1	0	0	5	0	0	0	0	188
22:00	1	129	9	0	4	0	0	0	0	0	0	0	0	143
23:00	1	83	9	0	0	3	0	0	1	0	0	0	0	97
Total	11	6005	1035	12	170	82	1	18	130	0	1	0	0	7465
Percent	0.1%	80.4%	13.9%	0.2%	2.3%	1.1%	0.0%	0.2%	1.7%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	07:00	11:00	07:00	11:00	07:00	06:00	09:00	11:00		03:00			11:00
Vol.	3	362	81	2	18	8	1	4	12		1			453
PM Peak	13:00	16:00	16:00	15:00	13:00	13:00		13:00	14:00					16:00
Vol.	1	563	98	4	19	9		2	12					691
Grand Total	11	6005	1035	12	170	82	1	18	130	0	1	0	0	7465
Percent	0.1%	80.4%	13.9%	0.2%	2.3%	1.1%	0.0%	0.2%	1.7%	0.0%	0.0%	0.0%	0.0%	

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City of Rialto
Valley Boulevard
E/ Cedar Avenue
24 Hour Directional Classification Count

RLT002
Site Code: 051-21547

Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/07/21	0	61	5	0	2	2	0	2	2	0	0	0	0	74
01:00	0	22	3	0	1	1	0	0	0	0	**1**	0	0	28
02:00	0	41	7	0	0	1	0	0	1	0	0	0	0	50
03:00	0	74	16	0	3	3	0	0	2	0	1	0	0	99
04:00	0	116	29	0	4	5	0	0	1	0	0	0	0	155
05:00	**1**	181	42	1	6	6	**1**	**4**	2	0	0	0	0	244
06:00	0	281	71	1	5	6	0	0	8	0	0	0	0	372
07:00	0	**458**	87	0	14	5	0	1	7	0	0	0	0	**572**
08:00	1	383	66	1	18	2	0	2	**16**	0	1	0	0	490
09:00	0	348	84	**2**	12	8	0	2	14	0	1	0	0	471
10:00	0	340	89	0	18	**9**	0	4	7	0	0	0	0	467
11:00	1	353	**92**	0	**19**	6	0	3	12	0	1	0	0	487
12 PM	1	404	94	0	9	3	0	1	10	0	0	0	0	522
13:00	0	443	**106**	0	**14**	3	**1**	1	8	0	0	0	0	576
14:00	1	448	71	0	11	4	0	2	**11**	0	0	0	0	548
15:00	0	**500**	105	**3**	8	3	0	1	9	**1**	0	0	0	**630**
16:00	0	443	76	1	9	5	0	**3**	3	0	0	0	0	540
17:00	2	419	72	0	8	3	0	2	4	0	0	0	0	510
18:00	1	357	56	0	4	**6**	0	2	3	0	0	0	0	429
19:00	**3**	286	56	0	1	2	0	1	5	0	0	0	0	354
20:00	2	231	42	0	0	0	0	0	7	0	0	**1**	0	283
21:00	0	182	25	0	0	0	0	1	1	0	**2**	0	0	211
22:00	0	143	10	0	3	2	0	0	4	0	0	0	0	162
23:00	0	89	11	0	2	0	0	2	0	0	0	0	0	104
Total	13	6603	1315	9	171	85	2	34	137	1	7	1	0	8378
Percent	0.2%	78.8%	15.7%	0.1%	2.0%	1.0%	0.0%	0.4%	1.6%	0.0%	0.1%	0.0%	0.0%	
AM Peak	05:00	07:00	11:00	09:00	11:00	10:00	05:00	05:00	08:00		01:00			07:00
Vol.	1	458	92	2	19	9	1	4	16		1			572
PM Peak	19:00	15:00	13:00	15:00	13:00	18:00	13:00	16:00	14:00	15:00	21:00	20:00		15:00
Vol.	3	500	106	3	14	6	1	3	11	1	2	1		630
Grand Total	13	6603	1315	9	171	85	2	34	137	1	7	1	0	8378
Percent	0.2%	78.8%	15.7%	0.1%	2.0%	1.0%	0.0%	0.4%	1.6%	0.0%	0.1%	0.0%	0.0%	

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City of Rialto
Valley Boulevard
E/ Cedar Avenue
24 Hour Directional Classification Count
Eastbound, Westbound

RLT002
Site Code: 051-21547

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/07/21	0	112	6	1	2	3	0	3	5	0	0	0	0	132
01:00	0	47	9	0	1	1	0	2	1	0	1	0	0	62
02:00	0	77	9	0	0	1	0	0	1	0	0	0	0	88
03:00	0	101	17	0	3	6	0	1	4	0	**2**	0	0	134
04:00	0	156	36	0	6	5	0	0	2	0	0	0	0	205
05:00	2	289	56	1	13	8	**1**	4	4	0	0	0	0	378
06:00	0	423	89	1	11	11	1	0	12	0	0	0	0	548
07:00	0	**820**	131	2	21	13	0	2	12	0	0	0	0	**1001**
08:00	1	683	105	2	28	6	0	2	**27**	0	1	0	0	855
09:00	0	633	138	**3**	25	12	0	**6**	22	0	1	0	0	840
10:00	**3**	678	152	0	35	**15**	0	5	14	0	0	0	0	902
11:00	1	689	**173**	0	**37**	11	0	4	24	0	1	0	0	940
12 PM	1	778	170	0	19	6	0	2	19	0	0	0	0	995
13:00	1	849	184	0	**33**	**12**	**1**	3	18	0	0	0	0	1101
14:00	2	893	148	0	28	10	0	**4**	**23**	0	0	0	0	1108
15:00	0	982	**195**	**7**	20	6	0	2	13	**1**	0	0	0	1226
16:00	0	**1006**	174	3	21	9	0	4	14	0	0	0	0	**1231**
17:00	2	922	165	1	15	7	0	2	11	0	0	0	0	1125
18:00	2	706	117	0	9	11	0	2	10	0	0	0	0	857
19:00	**4**	537	103	0	3	6	0	1	11	0	0	0	0	665
20:00	3	447	83	0	0	2	0	0	9	0	0	**1**	0	545
21:00	0	336	51	0	2	1	0	1	6	0	**2**	0	0	399
22:00	1	272	19	0	7	2	0	0	4	0	0	0	0	305
23:00	1	172	20	0	2	3	0	2	1	0	0	0	0	201
Total	24	12608	2350	21	341	167	3	52	267	1	8	1	0	15843
Percent	0.2%	79.6%	14.8%	0.1%	2.2%	1.1%	0.0%	0.3%	1.7%	0.0%	0.1%	0.0%	0.0%	
AM Peak	10:00	07:00	11:00	09:00	11:00	10:00	05:00	09:00	08:00		03:00			07:00
Vol.	3	820	173	3	37	15	1	6	27		2			1001
PM Peak	19:00	16:00	15:00	15:00	13:00	13:00	13:00	14:00	14:00	15:00	21:00	20:00		16:00
Vol.	4	1006	195	7	33	12	1	4	23	1	2	1		1231
Grand Total	24	12608	2350	21	341	167	3	52	267	1	8	1	0	15843
Percent	0.2%	79.6%	14.8%	0.1%	2.2%	1.1%	0.0%	0.3%	1.7%	0.0%	0.1%	0.0%	0.0%	

APPENDIX 3.2:

EXISTING (2021) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Volume Development - AM Peak Hour

1: Cedar Av. & Driveway 1

	PHF:	0.920		7:00					Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2021 PCE:	**0**	**871**	**0**	**0**	**1149**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2020**

2: Cedar Av. & Driveway 2

	PHF:	0.920		7:00					Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2021 PCE:	**0**	**871**	**0**	**0**	**1149**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2020**

3: Cedar Av. & Durst Dr.

	PHF:	0.907		7:30					Count Date:		10/7/2021	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2021 PCE:	**0**	**866**	**55**	**21**	**1128**	**0**	**0**	**0**	**0**	**11**	**0**	**5**	**2085**

4: Cedar Av. & Merrill Av.

	PHF:	0.889		7:30					Count Date:		10/7/2021	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2021 PCE:	**66**	**621**	**51**	**179**	**789**	**86**	**127**	**193**	**24**	**68**	**262**	**101**	**2565**

5: Cedar Av. & Valley Blvd.

	PHF:	0.929		7:00					Count Date:		10/7/2021	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2021 PCE:	**327**	**1014**	**249**	**45**	**1107**	**23**	**57**	**153**	**495**	**327**	**238**	**33**	**4066**

6: Cedar Av. & I-10 WB

	PHF:	0.974		7:00					Count Date:		10/7/2021	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2021 PCE:	**261**	**1208**	**0**	**0**	**1295**	**634**	**0**	**0**	**0**	**423**	**2**	**382**	**4203**

7: Cedar Av. & I-10 EB

	PHF:	0.983		7:00					Count Date:		10/7/2021	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2021 PCE:	**0**	**1026**	**404**	**409**	**1309**	**0**	**443**	**4**	**349**	**0**	**0**	**0**	**3943**

8: Driveway 3 & Durst Dr.

	PHF:	0.920		7:00					Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2021 PCE:	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**76**	**0**	**0**	**15**	**0**	**91**

Volume Development - PM Peak Hour

1: Cedar Av. & Driveway 1

	PHF:	0.920		4:30						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2021 PCE:	**0**	**1088**	**0**	**0**	**997**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,085**

2: Cedar Av. & Driveway 2

	PHF:	0.920		4:00						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2021 PCE:	**0**	**1088**	**0**	**0**	**997**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,085**

3: Cedar Av. & Durst Dr.

	PHF:	0.950		4:00						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2021 PCE:	**0**	**1058**	**14**	**8**	**989**	**0**	**0**	**0**	**0**	**56**	**0**	**30**	**2,154**

4: Cedar Av. & Merrill Av.

	PHF:	0.960		4:30						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2021 PCE:	**70**	**778**	**45**	**148**	**785**	**85**	**129**	**340**	**79**	**54**	**221**	**127**	**2,859**

5: Cedar Av. & Valley Blvd.

	PHF:	0.963		4:00						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2021 PCE:	**365**	**1122**	**211**	**91**	**968**	**78**	**265**	**400**	**464**	**249**	**251**	**68**	**4,530**

6: Cedar Av. & I-10 WB

	PHF:	0.937		4:15						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2021 PCE:	**169**	**1285**	**0**	**0**	**1155**	**526**	**0**	**0**	**0**	**254**	**2**	**413**	**3,802**

7: Cedar Av. & I-10 EB

	PHF:	0.942		4:30						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2021 PCE:	**0**	**913**	**330**	**372**	**1038**	**0**	**540**	**7**	**179**	**0**	**0**	**0**	**3,378**

8: Driveway 3 & Durst Dr.

	PHF:	0.920		4:00						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2021 PCE:	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**21**	**0**	**0**	**86**	**0**	**107**

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	5	866	55	21	1128
Future Vol, veh/h	11	5	866	55	21	1128
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	12	5	952	60	23	1240

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1648	506	0	0	1012	0
Stage 1	982	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	92	517	-	-	693	-
Stage 1	328	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	89	517	-	-	693	-
Mov Cap-2 Maneuver	214	-	-	-	-	-
Stage 1	328	-	-	-	-	-
Stage 2	462	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.7	0	0.2
HCM LOS	C		

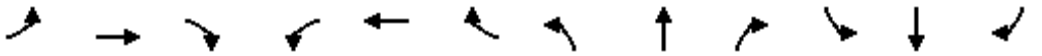
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	262	693	-
HCM Lane V/C Ratio	-	-	0.067	0.033	-
HCM Control Delay (s)	-	-	19.7	10.4	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	127	193	24	68	262	66	621	179	789
Future Volume (vph)	127	193	24	68	262	66	621	179	789
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	29.8	29.8	29.8	30.8	30.8	14.5	27.8	14.5	27.8
Total Split (s)	33.0	33.0	33.0	33.0	33.0	14.6	35.0	22.0	42.4
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	16.2%	38.9%	24.4%	47.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	4.6	5.8	4.6	5.8
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 71.1
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Cedar Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	193	24	68	262	101	66	621	51	179	789	86
Future Volume (veh/h)	127	193	24	68	262	101	66	621	51	179	789	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	143	217	0	76	294	61	74	698	15	201	887	85
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	314	522	443	326	820	168	96	966	21	248	1186	114
Arrive On Green	0.29	0.29	0.00	0.29	0.29	0.29	0.06	0.28	0.28	0.15	0.38	0.38
Sat Flow, veh/h	932	1800	1525	1056	2826	578	1619	3422	74	1619	3153	302
Grp Volume(v), veh/h	143	217	0	76	176	179	74	349	364	201	481	491
Grp Sat Flow(s),veh/h/ln	932	1800	1525	1056	1710	1695	1619	1710	1786	1619	1710	1746
Q Serve(g_s), s	8.5	5.7	0.0	3.7	4.8	4.9	2.7	10.9	10.9	7.1	14.4	14.4
Cycle Q Clear(g_c), s	13.4	5.7	0.0	9.4	4.8	4.9	2.7	10.9	10.9	7.1	14.4	14.4
Prop In Lane	1.00		1.00	1.00		0.34	1.00		0.04	1.00		0.17
Lane Grp Cap(c), veh/h	314	522	443	326	496	492	96	483	504	248	643	657
V/C Ratio(X)	0.46	0.42	0.00	0.23	0.36	0.36	0.77	0.72	0.72	0.81	0.75	0.75
Avail Cap(c_a), veh/h	473	829	702	505	787	780	274	845	883	477	1059	1081
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	16.9	0.0	20.7	16.6	16.6	27.4	19.1	19.1	24.2	16.0	16.0
Incr Delay (d2), s/veh	1.0	0.5	0.0	0.4	0.4	0.5	12.0	2.1	2.0	6.2	1.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	2.1	0.0	0.8	1.6	1.7	1.2	3.9	4.1	2.8	4.8	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.0	17.5	0.0	21.1	17.0	17.1	39.4	21.2	21.1	30.4	17.8	17.7
LnGrp LOS	C	B	A	C	B	B	D	C	C	C	B	B
Approach Vol, veh/h		360			431			787			1173	
Approach Delay, s/veh		19.7			17.8			22.9			19.9	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.7	22.5		22.9	8.1	28.0		22.9				
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8				
Max Green Setting (Gmax), s	17.4	29.2		27.2	10.0	36.6		27.2				
Max Q Clear Time (g_c+I1), s	9.1	12.9		15.4	4.7	16.4		11.4				
Green Ext Time (p_c), s	0.3	3.6		1.4	0.1	5.7		1.9				

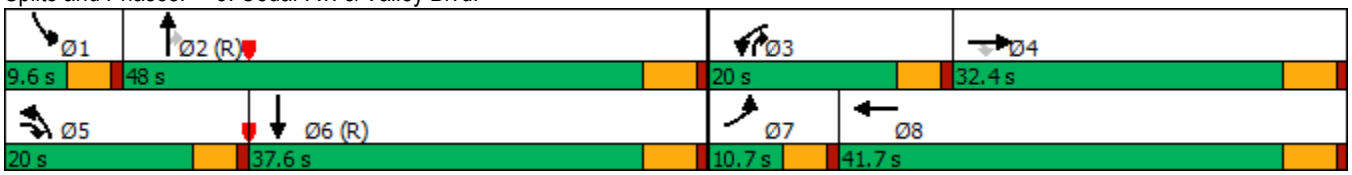
Intersection Summary												
HCM 6th Ctrl Delay			20.4									
HCM 6th LOS			C									

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	57	153	495	327	238	327	1014	249	45	1107
Future Volume (vph)	57	153	495	327	238	327	1014	249	45	1107
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	5	3	8	5	2	3	1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	32.4	9.6	9.6	32.4	9.6	32.4	9.6	9.6	32.4
Total Split (s)	10.7	32.4	20.0	20.0	41.7	20.0	48.0	20.0	9.6	37.6
Total Split (%)	9.7%	29.5%	18.2%	18.2%	37.9%	18.2%	43.6%	18.2%	8.7%	34.2%
Yellow Time (s)	3.6	4.4	3.6	3.6	4.4	3.6	4.4	3.6	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	4.6	5.4	4.6	5.4	4.6	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 49 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated

Splits and Phases: 5: Cedar Av. & Valley Blvd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	153	495	327	238	33	327	1014	249	45	1107	23
Future Volume (veh/h)	57	153	495	327	238	33	327	1014	249	45	1107	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	61	165	337	352	256	23	352	1090	181	48	1190	24
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	114	256	746	401	760	68	401	1729	968	103	2006	40
Arrive On Green	0.04	0.14	0.14	0.14	0.24	0.24	0.14	0.51	0.51	0.03	0.40	0.40
Sat Flow, veh/h	2956	1800	2685	2956	3175	283	2956	3420	1506	2956	4958	100
Grp Volume(v), veh/h	61	165	337	352	137	142	352	1090	181	48	786	428
Grp Sat Flow(s),veh/h/ln	1478	1800	1342	1478	1710	1748	1478	1710	1506	1478	1638	1782
Q Serve(g_s), s	2.2	9.5	11.4	12.9	7.3	7.4	12.9	25.4	5.4	1.8	20.7	20.7
Cycle Q Clear(g_c), s	2.2	9.5	11.4	12.9	7.3	7.4	12.9	25.4	5.4	1.8	20.7	20.7
Prop In Lane	1.00		1.00	1.00		0.16	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	114	256	746	401	409	418	401	1729	968	103	1326	721
V/C Ratio(X)	0.54	0.65	0.45	0.88	0.33	0.34	0.88	0.63	0.19	0.46	0.59	0.59
Avail Cap(c_a), veh/h	164	442	1023	414	564	577	414	1729	968	134	1326	721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.72	0.72	0.72
Uniform Delay (d), s/veh	51.9	44.6	32.8	46.6	34.6	34.6	46.6	19.7	8.0	52.1	25.6	25.6
Incr Delay (d2), s/veh	3.9	2.7	0.4	18.4	0.5	0.5	18.4	1.8	0.4	2.3	1.4	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.4	3.7	5.6	3.0	3.1	5.6	9.8	1.7	0.7	7.9	8.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.8	47.3	33.2	65.1	35.1	35.1	65.1	21.5	8.5	54.4	27.1	28.2
LnGrp LOS	E	D	C	E	D	D	E	C	A	D	C	C
Approach Vol, veh/h		563			631			1623			1262	
Approach Delay, s/veh		39.8			51.8			29.5			28.5	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	61.0	19.5	21.0	19.5	49.9	8.8	31.7
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Max Green Setting (Gmax), s	5.0	42.6	15.4	27.0	15.4	32.2	6.1	36.3
Max Q Clear Time (g_c+I1), s	3.8	27.4	14.9	13.4	14.9	22.7	4.2	9.4
Green Ext Time (p_c), s	0.0	7.1	0.1	1.9	0.1	5.0	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	34.1
HCM 6th LOS	C

Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	382	261	1208	1295	634
Future Volume (vph)	2	382	261	1208	1295	634
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	14.6	27.4	25.4	25.4
Total Split (s)	41.0	41.0	30.0	69.0	39.0	39.0
Total Split (%)	37.3%	37.3%	27.3%	62.7%	35.5%	35.5%
Yellow Time (s)	4.1	4.1	3.6	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	4.6	5.4	5.4	5.4
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 64 (58%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 6: Cedar Av. & I-10 WB



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	423	2	382	261	1208	0	0	1295	634
Future Volume (veh/h)	0	0	0	423	2	382	261	1208	0	0	1295	634
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				436	2	266	269	1245	0	0	1335	375
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				491	2	433	307	2282	0	0	2182	677
Arrive On Green				0.27	0.27	0.27	0.06	0.21	0.00	0.00	0.42	0.42
Sat Flow, veh/h				1802	8	1590	1810	3705	0	0	5358	1610
Grp Volume(v), veh/h				438	0	266	269	1245	0	0	1335	375
Grp Sat Flow(s),veh/h/ln				1810	0	1590	1810	1805	0	0	1729	1610
Q Serve(g_s), s				25.6	0.0	16.1	16.2	33.9	0.0	0.0	22.1	19.3
Cycle Q Clear(g_c), s				25.6	0.0	16.1	16.2	33.9	0.0	0.0	22.1	19.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				493	0	433	307	2282	0	0	2182	677
V/C Ratio(X)				0.89	0.00	0.61	0.88	0.55	0.00	0.00	0.61	0.55
Avail Cap(c_a), veh/h				591	0	519	418	2282	0	0	2182	677
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.64	0.64	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				38.4	0.0	35.0	50.8	29.4	0.0	0.0	24.9	24.1
Incr Delay (d2), s/veh				13.6	0.0	1.5	9.9	0.6	0.0	0.0	1.3	3.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.9	0.0	6.3	8.7	16.4	0.0	0.0	8.7	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				52.0	0.0	36.5	60.7	30.0	0.0	0.0	26.2	27.3
LnGrp LOS				D	A	D	E	C	A	A	C	C
Approach Vol, veh/h					704			1514			1710	
Approach Delay, s/veh					46.2			35.5			26.4	
Approach LOS					D			D			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	74.9		23.3	51.7		35.1						
Change Period (Y+Rc), s	5.4		4.6	5.4		5.1						
Max Green Setting (Gmax), s	63.6		25.4	33.6		35.9						
Max Q Clear Time (g_c+I1), s	35.9		18.2	24.1		27.6						
Green Ext Time (p_c), s	10.1		0.4	6.3		2.4						

Intersection Summary		
HCM 6th Ctrl Delay	33.4	
HCM 6th LOS	C	

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

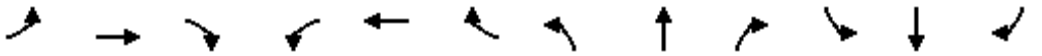
Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	443	4	1026	404	409	1309
Future Volume (vph)	443	4	1026	404	409	1309
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	4.0
Minimum Split (s)	20.0	20.0	30.4	30.4	14.5	25.4
Total Split (s)	42.0	42.0	31.0	31.0	37.0	68.0
Total Split (%)	38.2%	38.2%	28.2%	28.2%	33.6%	61.8%
Yellow Time (s)	4.1	4.1	4.4	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.4	5.4	4.6	5.4
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 35 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 7: Cedar Av. & I-10 EB





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	443	4	349	0	0	0	0	1026	404	409	1309	0
Future Volume (veh/h)	443	4	349	0	0	0	0	1026	404	409	1309	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1876	1876	1900	1900	0
Adj Flow Rate, veh/h	390	91	323				0	1047	224	417	1336	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	508	103	365				0	1697	526	454	2253	0
Arrive On Green	0.28	0.28	0.28				0.00	0.33	0.33	0.17	0.42	0.00
Sat Flow, veh/h	1810	366	1300				0	5292	1587	1810	3705	0
Grp Volume(v), veh/h	390	0	414				0	1047	224	417	1336	0
Grp Sat Flow(s),veh/h/ln	1810	0	1666				0	1708	1587	1810	1805	0
Q Serve(g_s), s	21.7	0.0	26.2				0.0	18.9	12.1	24.9	31.5	0.0
Cycle Q Clear(g_c), s	21.7	0.0	26.2				0.0	18.9	12.1	24.9	31.5	0.0
Prop In Lane	1.00		0.78				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	508	0	467				0	1697	526	454	2253	0
V/C Ratio(X)	0.77	0.00	0.89				0.00	0.62	0.43	0.92	0.59	0.00
Avail Cap(c_a), veh/h	607	0	559				0	1697	526	533	2253	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.64	0.64	0.00
Uniform Delay (d), s/veh	36.3	0.0	37.9				0.0	30.9	28.6	44.6	21.2	0.0
Incr Delay (d2), s/veh	4.9	0.0	14.0				0.0	1.7	2.5	13.7	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	0.0	12.2				0.0	7.8	4.8	13.2	14.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.2	0.0	51.8				0.0	32.6	31.2	58.3	21.9	0.0
LnGrp LOS	D	A	D				A	C	C	E	C	A
Approach Vol, veh/h		804						1271			1753	
Approach Delay, s/veh		46.7						32.3			30.6	
Approach LOS		D						C			C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	32.2	41.8		36.0		74.0
Change Period (Y+Rc), s	4.6	5.4		5.1		5.4
Max Green Setting (Gmax), s	32.4	25.6		36.9		62.6
Max Q Clear Time (g_c+I1), s	26.9	20.9		28.2		33.5
Green Ext Time (p_c), s	0.7	2.9		2.7		11.4

Intersection Summary			
HCM 6th Ctrl Delay			34.6
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	30	1058	14	8	989
Future Vol, veh/h	56	30	1058	14	8	989
Conflicting Peds, #/hr	0	0	0	8	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	59	32	1114	15	8	1041

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1667	573	0	0	1137	0
Stage 1	1130	-	-	-	-	-
Stage 2	537	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	89	468	-	-	622	-
Stage 1	274	-	-	-	-	-
Stage 2	556	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	87	464	-	-	617	-
Mov Cap-2 Maneuver	200	-	-	-	-	-
Stage 1	272	-	-	-	-	-
Stage 2	549	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.4	0	0.1
HCM LOS	D		

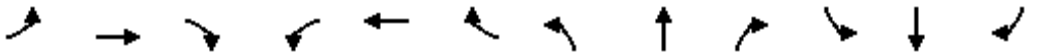
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	250	617	-
HCM Lane V/C Ratio	-	-	0.362	0.014	-
HCM Control Delay (s)	-	-	27.4	10.9	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	1.6	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	129	340	79	54	221	70	778	148	785
Future Volume (vph)	129	340	79	54	221	70	778	148	785
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	29.8	29.8	29.8	30.8	30.8	14.5	27.8	14.5	27.8
Total Split (s)	33.0	33.0	33.0	33.0	33.0	14.6	37.0	20.0	42.4
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	16.2%	41.1%	22.2%	47.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	4.6	5.8	4.6	5.8
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 73.7
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Cedar Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	340	79	54	221	127	70	778	45	148	785	85
Future Volume (veh/h)	129	340	79	54	221	127	70	778	45	148	785	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	134	354	36	56	230	90	73	810	44	154	818	82
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	323	521	436	222	701	266	94	1072	58	193	1214	122
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.06	0.33	0.33	0.12	0.39	0.39
Sat Flow, veh/h	963	1800	1506	903	2424	921	1619	3294	179	1619	3139	315
Grp Volume(v), veh/h	134	354	36	56	160	160	73	420	434	154	446	454
Grp Sat Flow(s),veh/h/ln	963	1800	1506	903	1710	1634	1619	1710	1763	1619	1710	1743
Q Serve(g_s), s	7.8	10.6	1.1	3.6	4.5	4.7	2.7	13.4	13.4	5.6	13.2	13.2
Cycle Q Clear(g_c), s	12.5	10.6	1.1	14.2	4.5	4.7	2.7	13.4	13.4	5.6	13.2	13.2
Prop In Lane	1.00		1.00	1.00		0.56	1.00		0.10	1.00		0.18
Lane Grp Cap(c), veh/h	323	521	436	222	495	473	94	557	574	193	661	674
V/C Ratio(X)	0.42	0.68	0.08	0.25	0.32	0.34	0.77	0.76	0.76	0.80	0.67	0.67
Avail Cap(c_a), veh/h	474	803	672	364	763	729	266	875	902	409	1027	1047
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	19.2	15.8	25.4	17.0	17.1	28.3	18.4	18.4	26.1	15.5	15.5
Incr Delay (d2), s/veh	0.9	1.6	0.1	0.6	0.4	0.4	12.6	2.1	2.1	7.3	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	4.0	0.3	0.7	1.5	1.6	1.3	4.7	4.8	2.3	4.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	20.7	15.9	26.0	17.4	17.5	40.9	20.5	20.4	33.4	16.7	16.7
LnGrp LOS	C	C	B	C	B	B	D	C	C	C	B	B
Approach Vol, veh/h		524			376			927			1054	
Approach Delay, s/veh		20.9			18.7			22.1			19.1	
Approach LOS		C			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.9	25.6		23.4	8.1	29.4		23.4				
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8				
Max Green Setting (Gmax), s	15.4	31.2		27.2	10.0	36.6		27.2				
Max Q Clear Time (g_c+I1), s	7.6	15.4		14.5	4.7	15.2		16.2				
Green Ext Time (p_c), s	0.2	4.4		2.2	0.1	5.3		1.5				

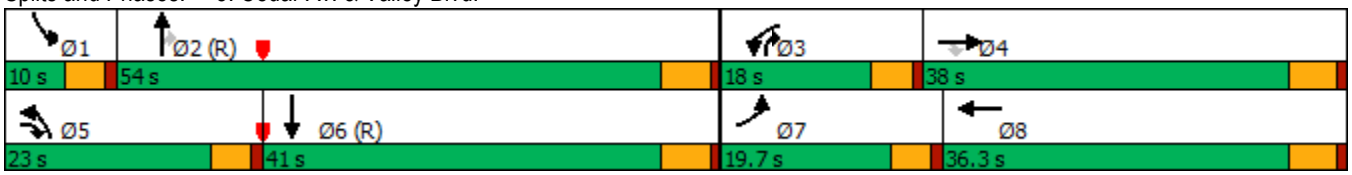
Intersection Summary												
HCM 6th Ctrl Delay			20.4									
HCM 6th LOS			C									

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	265	400	464	249	251	365	1122	211	91	968
Future Volume (vph)	265	400	464	249	251	365	1122	211	91	968
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	5	3	8	5	2	3	1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	33.4	9.6	9.6	33.4	9.6	32.4	9.6	9.6	32.4
Total Split (s)	19.7	38.0	23.0	18.0	36.3	23.0	54.0	18.0	10.0	41.0
Total Split (%)	16.4%	31.7%	19.2%	15.0%	30.3%	19.2%	45.0%	15.0%	8.3%	34.2%
Yellow Time (s)	3.6	4.4	3.6	3.6	4.4	3.6	4.4	3.6	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	4.6	5.4	4.6	5.4	4.6	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	C-Max	None	None	C-Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 98 (82%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated

Splits and Phases: 5: Cedar Av. & Valley Blvd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	265	400	464	249	251	68	365	1122	211	91	968	78
Future Volume (veh/h)	265	400	464	249	251	68	365	1122	211	91	968	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	276	417	332	259	261	59	380	1169	141	95	1008	75
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	325	455	1065	306	685	152	427	1477	805	133	1551	115
Arrive On Green	0.11	0.25	0.25	0.10	0.25	0.25	0.14	0.43	0.43	0.05	0.33	0.33
Sat Flow, veh/h	2956	1800	2675	2956	2779	617	2956	3420	1499	2956	4667	347
Grp Volume(v), veh/h	276	417	332	259	159	161	380	1169	141	95	707	376
Grp Sat Flow(s),veh/h/ln	1478	1800	1338	1478	1710	1686	1478	1710	1499	1478	1638	1737
Q Serve(g_s), s	11.0	27.0	10.2	10.3	9.3	9.6	15.1	35.4	5.8	3.8	22.1	22.1
Cycle Q Clear(g_c), s	11.0	27.0	10.2	10.3	9.3	9.6	15.1	35.4	5.8	3.8	22.1	22.1
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	325	455	1065	306	422	416	427	1477	805	133	1089	577
V/C Ratio(X)	0.85	0.92	0.31	0.85	0.38	0.39	0.89	0.79	0.18	0.71	0.65	0.65
Avail Cap(c_a), veh/h	372	489	1115	330	440	434	453	1477	805	133	1089	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	52.4	43.6	24.9	52.8	37.5	37.7	50.4	29.4	14.3	56.5	34.1	34.1
Incr Delay (d2), s/veh	15.2	21.2	0.2	17.2	0.6	0.6	18.5	4.4	0.5	13.3	2.4	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	14.4	3.2	4.5	3.9	3.9	6.6	14.7	2.0	1.6	8.9	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.6	64.7	25.0	70.0	38.1	38.2	68.9	33.9	14.8	69.9	36.5	38.6
LnGrp LOS	E	E	C	E	D	D	E	C	B	E	D	D
Approach Vol, veh/h		1025			579			1690			1178	
Approach Delay, s/veh		52.6			52.4			40.1			39.9	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	57.2	17.0	35.8	21.9	45.3	17.8	35.0
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Max Green Setting (Gmax), s	5.4	48.6	13.4	32.6	18.4	35.6	15.1	30.9
Max Q Clear Time (g_c+I1), s	5.8	37.4	12.3	29.0	17.1	24.1	13.0	11.6
Green Ext Time (p_c), s	0.0	6.1	0.1	1.3	0.2	5.1	0.2	1.6

Intersection Summary	
HCM 6th Ctrl Delay	44.5
HCM 6th LOS	D

Notes

User approved changes to right turn type.

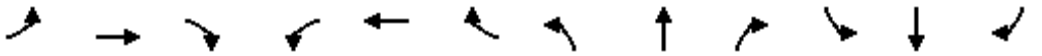
Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	413	169	1285	1155	526
Future Volume (vph)	2	413	169	1285	1155	526
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	14.6	27.4	25.4	25.4
Total Split (s)	39.0	39.0	29.0	81.0	52.0	52.0
Total Split (%)	32.5%	32.5%	24.2%	67.5%	43.3%	43.3%
Yellow Time (s)	4.1	4.1	3.6	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	4.6	5.4	5.4	5.4
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 107 (89%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 6: Cedar Av. & I-10 WB





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	254	2	413	169	1285	0	0	1155	526
Future Volume (veh/h)	0	0	0	254	2	413	169	1285	0	0	1155	526
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				270	111	345	180	1367	0	0	1229	355
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				317	130	387	208	2415	0	0	2675	830
Arrive On Green				0.24	0.24	0.24	0.23	1.00	0.00	0.00	0.52	0.52
Sat Flow, veh/h				1300	535	1589	1810	3705	0	0	5358	1609
Grp Volume(v), veh/h				381	0	345	180	1367	0	0	1229	355
Grp Sat Flow(s),veh/h/ln				1835	0	1589	1810	1805	0	0	1729	1609
Q Serve(g_s), s				23.8	0.0	25.2	11.5	0.0	0.0	0.0	18.0	16.4
Cycle Q Clear(g_c), s				23.8	0.0	25.2	11.5	0.0	0.0	0.0	18.0	16.4
Prop In Lane				0.71		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				447	0	387	208	2415	0	0	2675	830
V/C Ratio(X)				0.85	0.00	0.89	0.87	0.57	0.00	0.00	0.46	0.43
Avail Cap(c_a), veh/h				518	0	449	368	2415	0	0	2675	830
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.75	0.75	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				43.3	0.0	43.9	45.3	0.0	0.0	0.0	18.4	18.0
Incr Delay (d2), s/veh				11.6	0.0	17.8	8.0	0.7	0.0	0.0	0.6	1.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.1	0.0	11.7	4.9	0.2	0.0	0.0	6.9	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				54.9	0.0	61.6	53.4	0.7	0.0	0.0	19.0	19.7
LnGrp LOS				D	A	E	D	A	A	A	B	B
Approach Vol, veh/h					726			1547			1584	
Approach Delay, s/veh					58.1			6.9			19.2	
Approach LOS					E			A			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		85.7			18.4	67.3		34.3				
Change Period (Y+Rc), s		5.4			4.6	5.4		5.1				
Max Green Setting (Gmax), s		75.6			24.4	46.6		33.9				
Max Q Clear Time (g_c+I1), s		2.0			13.5	20.0		27.2				
Green Ext Time (p_c), s		14.5			0.3	10.8		2.1				

Intersection Summary		
HCM 6th Ctrl Delay	21.6	
HCM 6th LOS	C	

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

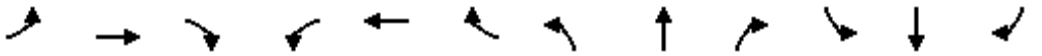
Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	540	7	913	330	372	1038
Future Volume (vph)	540	7	913	330	372	1038
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	4.0
Minimum Split (s)	20.0	20.0	30.4	30.4	14.5	25.4
Total Split (s)	40.0	40.0	46.0	46.0	34.0	80.0
Total Split (%)	33.3%	33.3%	38.3%	38.3%	28.3%	66.7%
Yellow Time (s)	4.1	4.1	4.4	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.4	5.4	4.6	5.4
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 90 (75%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 7: Cedar Av. & I-10 EB





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	540	7	179	0	0	0	0	913	330	372	1038	0
Future Volume (veh/h)	540	7	179	0	0	0	0	913	330	372	1038	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1876	1876	1900	1900	0
Adj Flow Rate, veh/h	379	280	177				0	971	181	396	1104	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	502	302	191				0	1882	576	415	2294	0
Arrive On Green	0.28	0.28	0.28				0.00	0.37	0.37	0.46	1.00	0.00
Sat Flow, veh/h	1810	1088	688				0	5292	1568	1810	3705	0
Grp Volume(v), veh/h	379	0	457				0	971	181	396	1104	0
Grp Sat Flow(s),veh/h/ln	1810	0	1776				0	1708	1568	1810	1805	0
Q Serve(g_s), s	23.0	0.0	30.0				0.0	17.8	9.9	25.3	0.0	0.0
Cycle Q Clear(g_c), s	23.0	0.0	30.0				0.0	17.8	9.9	25.3	0.0	0.0
Prop In Lane	1.00		0.39				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	502	0	492				0	1882	576	415	2294	0
V/C Ratio(X)	0.76	0.00	0.93				0.00	0.52	0.31	0.95	0.48	0.00
Avail Cap(c_a), veh/h	526	0	517				0	1882	576	443	2294	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.86	0.86	0.00
Uniform Delay (d), s/veh	39.7	0.0	42.2				0.0	29.6	27.1	31.8	0.0	0.0
Incr Delay (d2), s/veh	5.9	0.0	22.7				0.0	1.0	1.4	27.4	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	0.0	16.0				0.0	7.3	3.9	11.2	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.6	0.0	65.0				0.0	30.6	28.6	59.2	0.6	0.0
LnGrp LOS	D	A	E				A	C	C	E	A	A
Approach Vol, veh/h		836						1152			1500	
Approach Delay, s/veh		56.2						30.3			16.1	
Approach LOS		E						C			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	32.2	49.5		38.4		81.6
Change Period (Y+Rc), s	4.6	5.4		5.1		5.4
Max Green Setting (Gmax), s	29.4	40.6		34.9		74.6
Max Q Clear Time (g_c+I1), s	27.3	19.8		32.0		2.0
Green Ext Time (p_c), s	0.3	7.2		1.2		10.0

Intersection Summary	
HCM 6th Ctrl Delay	30.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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APPENDIX 3.3:

EXISTING (2021) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

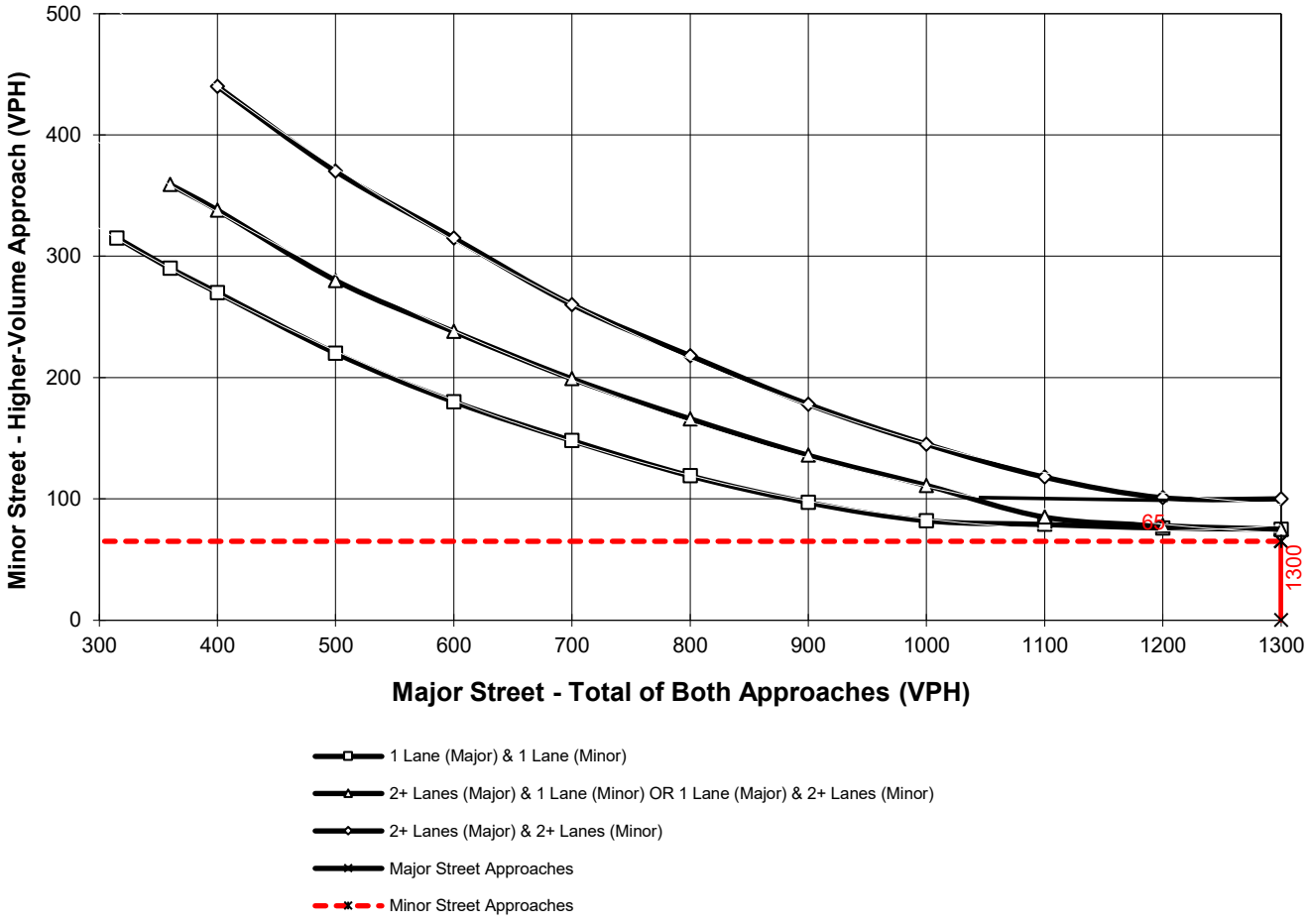
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing (2021) Conditions - Weekday PM Peak Hour**

Major Street Name = **Cedar Avenue**
Total of Both Approaches (VPH) = **1965**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Durst Drive**
High Volume Approach (VPH) = **65**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

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APPENDIX 3.4:

EXISTING (2021) CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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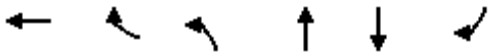


Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	477	355	269	1245	1335	654
v/c Ratio	0.90	0.69	0.79	0.58	0.71	0.65
Control Delay	57.9	34.0	47.2	5.0	29.6	5.6
Queue Delay	53.2	0.0	0.0	1.3	2.0	0.2
Total Delay	111.1	34.0	47.2	6.4	31.7	5.9
Queue Length 50th (ft)	327	182	84	40	338	56
Queue Length 95th (ft)	#520	294	m153	55	400	m22
Internal Link Dist (ft)	921			330	170	
Turn Bay Length (ft)		530				
Base Capacity (vph)	558	540	416	2151	1891	1004
Starvation Cap Reductn	0	0	0	647	0	52
Spillback Cap Reductn	218	0	0	1	389	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.40	0.66	0.65	0.83	0.89	0.69

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

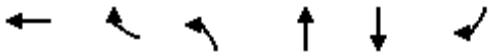


Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	407	405	1047	412	417	1336
v/c Ratio	0.82	0.84	0.66	0.53	0.88	0.60
Control Delay	50.4	47.9	37.2	6.3	46.4	31.0
Queue Delay	0.0	0.0	0.0	0.0	5.9	49.6
Total Delay	50.4	47.9	37.2	6.3	52.3	80.5
Queue Length 50th (ft)	277	248	243	0	282	524
Queue Length 95th (ft)	384	362	#325	83	m#388	607
Internal Link Dist (ft)		1189	666			330
Turn Bay Length (ft)	400			575		
Base Capacity (vph)	575	553	1591	772	531	2223
Starvation Cap Reductn	0	0	0	0	72	1140
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.73	0.66	0.53	0.91	1.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	369	342	180	1367	1229	560
v/c Ratio	0.85	0.79	0.70	0.57	0.50	0.53
Control Delay	59.2	47.3	83.1	10.6	18.2	2.6
Queue Delay	8.1	0.0	0.0	0.2	0.0	0.2
Total Delay	67.2	47.3	83.1	10.7	18.2	2.9
Queue Length 50th (ft)	269	210	150	132	151	17
Queue Length 95th (ft)	#398	326	m193	172	235	26
Internal Link Dist (ft)	921			330	170	
Turn Bay Length (ft)		530				
Base Capacity (vph)	486	477	367	2389	2475	1053
Starvation Cap Reductn	0	0	0	296	0	106
Spillback Cap Reductn	84	0	0	28	82	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.72	0.49	0.65	0.51	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	396	375	971	351	396	1104
v/c Ratio	0.85	0.79	0.53	0.44	0.90	0.48
Control Delay	59.1	48.5	32.8	5.0	73.6	18.0
Queue Delay	0.0	0.0	0.0	0.0	42.9	0.7
Total Delay	59.1	48.5	32.8	5.0	116.5	18.7
Queue Length 50th (ft)	298	247	234	0	328	228
Queue Length 95th (ft)	#455	371	269	64	#493	298
Internal Link Dist (ft)		1189	666			330
Turn Bay Length (ft)	400			575		
Base Capacity (vph)	509	514	1909	805	456	2339
Starvation Cap Reductn	0	0	0	0	89	791
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.73	0.51	0.44	1.08	0.71

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX 5.1:

EAP (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Volume Development - AM Peak Hour

1: Cedar Av. & Driveway 1

	PHF:	0.920		7:00						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAP	0	913	26	0	1,221	0	0	0	0	4	0	0	2,164

2: Cedar Av. & Driveway 2

	PHF:	0.920		7:00						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAP	0	936	14	0	1,224	0	0	0	0	0	0	3	2,177

3: Cedar Av. & Durst Dr.

	PHF:	0.907		7:30						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAP	0	940	88	48	1,178	0	0	0	0	27	0	9	2,289

4: Cedar Av. & Merrill Av.

	PHF:	0.889		7:30						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAP	68	713	53	186	838	89	134	201	25	71	272	107	2,758

5: Cedar Av. & Valley Blvd.

	PHF:	0.929		7:00						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAP	340	1,122	259	46	1,169	23	59	159	515	340	248	34	4,315

6: Cedar Av. & I-10 WB

	PHF:	0.974		7:00						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAP	271	1,299	0	0	1,354	670	0	0	0	440	2	422	4,458

7: Cedar Av. & I-10 EB

	PHF:	0.983		7:00						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAP	0	1,069	420	433	1,361	0	501	4	363	0	0	0	4,151

8: Driveway 3 & Durst Dr.

	PHF:	0.920		7:00						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAP	0	0	0	0	0	20	57	79	0	0	16	0	171

Volume Development - PM Peak Hour

1: Cedar Av. & Driveway 1

	PHF:	0.920		4:30						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAP	0	1,158	9	0	1,046	0	0	0	0	13	0	0	2,226

2: Cedar Av. & Driveway 2

	PHF:	0.920		4:00						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAP	0	1,157	5	0	1,059	0	0	0	0	0	0	10	2,231

3: Cedar Av. & Durst Dr.

	PHF:	0.950		4:00						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAP	0	1,115	25	17	1,042	0	0	0	0	115	0	47	2,361

4: Cedar Av. & Merrill Av.

	PHF:	0.960		4:30						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAP	72	833	47	155	884	90	135	354	82	56	230	133	3,072

5: Cedar Av. & Valley Blvd.

	PHF:	0.963		4:00						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAP	379	1,191	220	95	1,074	81	276	416	483	259	261	71	4,803

6: Cedar Av. & I-10 WB

	PHF:	0.937		4:15						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAP	175	1,351	0	0	1,229	587	0	0	0	264	2	438	4,046

7: Cedar Av. & I-10 EB

	PHF:	0.942		4:30						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAP	0	951	343	412	1,081	0	576	7	186	0	0	0	3,556

8: Driveway 3 & Durst Dr.

	PHF:	0.920		4:00						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAP	0	0	0	0	0	73	20	22	0	0	89	0	204

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	0	913	26	0	1221
Future Vol, veh/h	4	0	913	26	0	1221
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	0	992	28	0	1327

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1670	-	0	0	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Critical Hdwy	6.8	-	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	-	-	-	-	-
Pot Cap-1 Maneuver	89	0	-	-	0	-
Stage 1	319	0	-	-	0	-
Stage 2	479	0	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	89	-	-	-	-	-
Mov Cap-2 Maneuver	264	-	-	-	-	-
Stage 1	319	-	-	-	-	-
Stage 2	479	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.9	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	264	-
HCM Lane V/C Ratio	-	-	0.016	-
HCM Control Delay (s)	-	-	18.9	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	936	14	0	1224
Future Vol, veh/h	0	3	936	14	0	1224
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	1017	15	0	1330

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	516	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	509	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	509	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	509	-
HCM Lane V/C Ratio	-	-	0.006	-
HCM Control Delay (s)	-	-	12.1	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	9	940	88	48	1178
Future Vol, veh/h	27	9	940	88	48	1178
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	10	1033	97	53	1295

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1836	565	0	0	1130	0
Stage 1	1082	-	-	-	-	-
Stage 2	754	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	69	473	-	-	626	-
Stage 1	291	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	63	473	-	-	626	-
Mov Cap-2 Maneuver	229	-	-	-	-	-
Stage 1	291	-	-	-	-	-
Stage 2	394	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.1	0	0.4
HCM LOS	C		

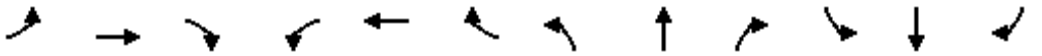
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	263	626	-
HCM Lane V/C Ratio	-	-	0.15	0.084	-
HCM Control Delay (s)	-	-	21.1	11.3	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.5	0.3	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	134	201	25	71	272	68	713	186	838
Future Volume (vph)	134	201	25	71	272	68	713	186	838
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	29.8	29.8	29.8	30.8	30.8	14.5	27.8	14.5	27.8
Total Split (s)	33.0	33.0	33.0	33.0	33.0	14.6	35.0	22.0	42.4
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	16.2%	38.9%	24.4%	47.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	4.6	5.8	4.6	5.8
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 75.7
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Cedar Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	201	25	71	272	107	68	713	53	186	838	89
Future Volume (veh/h)	134	201	25	71	272	107	68	713	53	186	838	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	151	226	1	80	306	68	76	801	18	209	942	88
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	300	535	452	314	828	181	94	1034	23	253	1267	118
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.06	0.30	0.30	0.16	0.40	0.40
Sat Flow, veh/h	916	1800	1521	1047	2788	611	1619	3419	77	1619	3162	295
Grp Volume(v), veh/h	151	226	1	80	186	188	76	401	418	209	509	521
Grp Sat Flow(s),veh/h/ln	916	1800	1521	1047	1710	1689	1619	1710	1785	1619	1710	1747
Q Serve(g_s), s	10.4	6.7	0.0	4.4	5.7	5.8	3.1	14.2	14.2	8.3	16.9	16.9
Cycle Q Clear(g_c), s	16.2	6.7	0.0	11.1	5.7	5.8	3.1	14.2	14.2	8.3	16.9	16.9
Prop In Lane	1.00		1.00	1.00		0.36	1.00		0.04	1.00		0.17
Lane Grp Cap(c), veh/h	300	535	452	314	508	502	94	517	540	253	685	700
V/C Ratio(X)	0.50	0.42	0.00	0.26	0.37	0.37	0.81	0.77	0.77	0.83	0.74	0.74
Avail Cap(c_a), veh/h	403	738	623	432	701	692	244	752	786	424	943	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	18.8	16.4	23.2	18.4	18.5	30.9	21.1	21.1	27.1	17.0	17.0
Incr Delay (d2), s/veh	1.3	0.5	0.0	0.4	0.4	0.5	14.7	3.1	3.0	6.7	2.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.5	0.0	1.0	2.0	2.0	1.5	5.3	5.5	3.3	5.8	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	19.3	16.4	23.6	18.8	18.9	45.5	24.2	24.1	33.8	19.1	19.0
LnGrp LOS	C	B	B	C	B	B	D	C	C	C	B	B
Approach Vol, veh/h		378			454			895			1239	
Approach Delay, s/veh		22.0			19.7			25.9			21.5	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	25.9		25.5	8.5	32.4		25.5				
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8				
Max Green Setting (Gmax), s	17.4	29.2		27.2	10.0	36.6		27.2				
Max Q Clear Time (g_c+I1), s	10.3	16.2		18.2	5.1	18.9		13.1				
Green Ext Time (p_c), s	0.3	3.8		1.3	0.1	5.8		1.9				

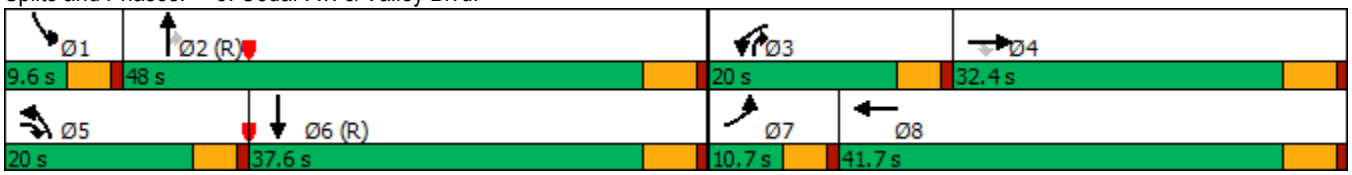
Intersection Summary			
HCM 6th Ctrl Delay		22.7	
HCM 6th LOS		C	

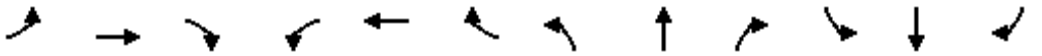
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	59	159	515	340	248	340	1122	259	46	1169
Future Volume (vph)	59	159	515	340	248	340	1122	259	46	1169
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	5	3	8	5	2	3	1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	32.4	9.6	9.6	32.4	9.6	32.4	9.6	9.6	32.4
Total Split (s)	10.7	32.4	20.0	20.0	41.7	20.0	48.0	20.0	9.6	37.6
Total Split (%)	9.7%	29.5%	18.2%	18.2%	37.9%	18.2%	43.6%	18.2%	8.7%	34.2%
Yellow Time (s)	3.6	4.4	3.6	3.6	4.4	3.6	4.4	3.6	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	4.6	5.4	4.6	5.4	4.6	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 49 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated

Splits and Phases: 5: Cedar Av. & Valley Blvd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	159	515	340	248	34	340	1122	259	46	1169	23
Future Volume (veh/h)	59	159	515	340	248	34	340	1122	259	46	1169	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	63	171	359	366	267	25	366	1206	191	49	1257	24
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	115	268	774	413	789	73	413	1691	958	104	1936	37
Arrive On Green	0.04	0.15	0.15	0.14	0.25	0.25	0.14	0.49	0.49	0.04	0.39	0.39
Sat Flow, veh/h	2956	1800	2685	2956	3163	294	2956	3420	1506	2956	4964	95
Grp Volume(v), veh/h	63	171	359	366	143	149	366	1206	191	49	830	451
Grp Sat Flow(s),veh/h/ln	1478	1800	1342	1478	1710	1746	1478	1710	1506	1478	1638	1783
Q Serve(g_s), s	2.3	9.8	12.1	13.4	7.6	7.7	13.4	30.3	5.8	1.8	22.8	22.8
Cycle Q Clear(g_c), s	2.3	9.8	12.1	13.4	7.6	7.7	13.4	30.3	5.8	1.8	22.8	22.8
Prop In Lane	1.00		1.00	1.00		0.17	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	115	268	774	413	427	436	413	1691	958	104	1278	695
V/C Ratio(X)	0.55	0.64	0.46	0.89	0.34	0.34	0.89	0.71	0.20	0.47	0.65	0.65
Avail Cap(c_a), veh/h	164	442	1034	414	564	576	414	1691	958	134	1278	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.70	0.70	0.70
Uniform Delay (d), s/veh	51.9	44.0	32.1	46.5	33.8	33.8	46.5	21.7	8.4	52.0	27.4	27.4
Incr Delay (d2), s/veh	4.0	2.5	0.4	19.9	0.5	0.5	19.9	2.6	0.5	2.3	1.8	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.5	3.9	5.9	3.1	3.2	5.9	11.9	1.8	0.7	8.8	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.0	46.6	32.6	66.4	34.3	34.3	66.4	24.3	8.9	54.3	29.2	30.7
LnGrp LOS	E	D	C	E	C	C	E	C	A	D	C	C
Approach Vol, veh/h		593			658			1763			1330	
Approach Delay, s/veh		39.1			52.1			31.4			30.6	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	59.8	20.0	21.8	20.0	48.3	8.9	32.9
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Max Green Setting (Gmax), s	5.0	42.6	15.4	27.0	15.4	32.2	6.1	36.3
Max Q Clear Time (g_c+I1), s	3.8	32.3	15.4	14.1	15.4	24.8	4.3	9.7
Green Ext Time (p_c), s	0.0	6.1	0.0	1.9	0.0	4.4	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	35.3
HCM 6th LOS	D

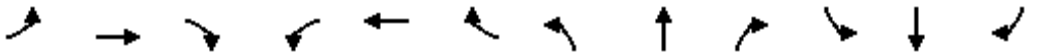
Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	422	271	1299	1354	670
Future Volume (vph)	2	422	271	1299	1354	670
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	14.6	27.4	25.4	25.4
Total Split (s)	41.0	41.0	30.0	69.0	39.0	39.0
Total Split (%)	37.3%	37.3%	27.3%	62.7%	35.5%	35.5%
Yellow Time (s)	4.1	4.1	3.6	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	4.6	5.4	5.4	5.4
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 64 (58%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 6: Cedar Av. & I-10 WB





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	440	2	422	271	1299	0	0	1354	670
Future Volume (veh/h)	0	0	0	440	2	422	271	1299	0	0	1354	670
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				454	2	307	279	1339	0	0	1396	412
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				508	2	448	317	2248	0	0	2105	653
Arrive On Green				0.28	0.28	0.28	0.06	0.21	0.00	0.00	0.41	0.41
Sat Flow, veh/h				1802	8	1590	1810	3705	0	0	5358	1610
Grp Volume(v), veh/h				456	0	307	279	1339	0	0	1396	412
Grp Sat Flow(s),veh/h/ln				1810	0	1590	1810	1805	0	0	1729	1610
Q Serve(g_s), s				26.6	0.0	18.9	16.8	36.9	0.0	0.0	24.1	22.5
Cycle Q Clear(g_c), s				26.6	0.0	18.9	16.8	36.9	0.0	0.0	24.1	22.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				510	0	448	317	2248	0	0	2105	653
V/C Ratio(X)				0.89	0.00	0.69	0.88	0.60	0.00	0.00	0.66	0.63
Avail Cap(c_a), veh/h				591	0	519	418	2248	0	0	2105	653
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.52	0.52	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.9	0.0	35.2	50.7	31.2	0.0	0.0	26.6	26.1
Incr Delay (d2), s/veh				14.6	0.0	3.1	8.9	0.6	0.0	0.0	1.7	4.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				13.6	0.0	7.6	8.9	17.9	0.0	0.0	9.6	8.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				52.6	0.0	38.2	59.6	31.8	0.0	0.0	28.2	30.7
LnGrp LOS				D	A	D	E	C	A	A	C	C
Approach Vol, veh/h					763			1618			1808	
Approach Delay, s/veh					46.8			36.6			28.8	
Approach LOS					D			D			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	73.9		23.9	50.0		36.1						
Change Period (Y+Rc), s	5.4		4.6	5.4		5.1						
Max Green Setting (Gmax), s	63.6		25.4	33.6		35.9						
Max Q Clear Time (g_c+I1), s	38.9		18.8	26.1		28.6						
Green Ext Time (p_c), s	10.6		0.4	5.4		2.4						

Intersection Summary		
HCM 6th Ctrl Delay	35.1	
HCM 6th LOS	D	

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

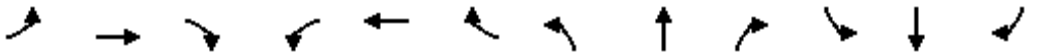
Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	501	4	1069	420	433	1361
Future Volume (vph)	501	4	1069	420	433	1361
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	4.0
Minimum Split (s)	20.0	20.0	30.4	30.4	14.5	25.4
Total Split (s)	42.0	42.0	31.0	31.0	37.0	68.0
Total Split (%)	38.2%	38.2%	28.2%	28.2%	33.6%	61.8%
Yellow Time (s)	4.1	4.1	4.4	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.4	5.4	4.6	5.4
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 35 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 7: Cedar Av. & I-10 EB





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	501	4	363	0	0	0	0	1069	420	433	1361	0
Future Volume (veh/h)	501	4	363	0	0	0	0	1069	420	433	1361	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1876	1876	1900	1900	0
Adj Flow Rate, veh/h	426	123	337				0	1091	241	442	1389	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	547	136	372				0	1518	470	477	2173	0
Arrive On Green	0.30	0.30	0.30				0.00	0.30	0.30	0.18	0.40	0.00
Sat Flow, veh/h	1810	449	1230				0	5292	1587	1810	3705	0
Grp Volume(v), veh/h	426	0	460				0	1091	241	442	1389	0
Grp Sat Flow(s),veh/h/ln	1810	0	1679				0	1708	1587	1810	1805	0
Q Serve(g_s), s	23.6	0.0	29.0				0.0	20.9	13.9	26.4	34.0	0.0
Cycle Q Clear(g_c), s	23.6	0.0	29.0				0.0	20.9	13.9	26.4	34.0	0.0
Prop In Lane	1.00		0.73				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	547	0	508				0	1518	470	477	2173	0
V/C Ratio(X)	0.78	0.00	0.91				0.00	0.72	0.51	0.93	0.64	0.00
Avail Cap(c_a), veh/h	607	0	563				0	1518	470	533	2173	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.56	0.56	0.00
Uniform Delay (d), s/veh	35.0	0.0	36.9				0.0	34.6	32.1	44.2	23.2	0.0
Incr Delay (d2), s/veh	5.8	0.0	17.3				0.0	3.0	3.9	13.7	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	0.0	14.0				0.0	8.8	5.7	13.9	15.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.8	0.0	54.1				0.0	37.5	36.0	57.9	24.0	0.0
LnGrp LOS	D	A	D				A	D	D	E	C	A
Approach Vol, veh/h		886						1332			1831	
Approach Delay, s/veh		47.7						37.3			32.2	
Approach LOS		D						D			C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	33.6	38.0		38.4		71.6
Change Period (Y+Rc), s	4.6	5.4		5.1		5.4
Max Green Setting (Gmax), s	32.4	25.6		36.9		62.6
Max Q Clear Time (g_c+I1), s	28.4	22.9		31.0		36.0
Green Ext Time (p_c), s	0.6	1.8		2.3		11.5

Intersection Summary			
HCM 6th Ctrl Delay			37.3
HCM 6th LOS			D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	57	79	16	0	0	20
Future Vol, veh/h	57	79	16	0	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	62	86	17	0	0	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	17	0	-	0	227	17
Stage 1	-	-	-	-	17	-
Stage 2	-	-	-	-	210	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1613	-	-	-	766	1068
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	830	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1613	-	-	-	735	1068
Mov Cap-2 Maneuver	-	-	-	-	735	-
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	830	-

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1613	-	-	-	1068
HCM Lane V/C Ratio	0.038	-	-	-	0.02
HCM Control Delay (s)	7.3	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	0	1158	9	0	1046
Future Vol, veh/h	13	0	1158	9	0	1046
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	0	1259	10	0	1137

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1833	-	0	0	-	-
Stage 1	1264	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Critical Hdwy	6.8	-	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	-	-	-	-	-
Pot Cap-1 Maneuver	69	0	-	-	0	-
Stage 1	233	0	-	-	0	-
Stage 2	535	0	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	69	-	-	-	-	-
Mov Cap-2 Maneuver	208	-	-	-	-	-
Stage 1	233	-	-	-	-	-
Stage 2	535	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	208	-
HCM Lane V/C Ratio	-	-	0.068	-
HCM Control Delay (s)	-	-	23.6	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.2	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	1157	5	0	1059
Future Vol, veh/h	0	10	1157	5	0	1059
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	11	1258	5	0	1151

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	632	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	428	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	428	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	428	-
HCM Lane V/C Ratio	-	-	0.025	-
HCM Control Delay (s)	-	-	13.6	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Intersection	
Int Delay, s/veh	3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	115	47	1115	25	17	1042
Future Vol, veh/h	115	47	1115	25	17	1042
Conflicting Peds, #/hr	0	0	0	8	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	121	49	1174	26	18	1097

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1780	608	0	0	1208	0
Stage 1	1195	-	-	-	-	-
Stage 2	585	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 75	444	-	-	585	-
Stage 1	254	-	-	-	-	-
Stage 2	526	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 72	441	-	-	581	-
Mov Cap-2 Maneuver	221	-	-	-	-	-
Stage 1	252	-	-	-	-	-
Stage 2	510	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	42.5	0	0.2
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	258	581	-
HCM Lane V/C Ratio	-	-	0.661	0.031	-
HCM Control Delay (s)	-	-	42.5	11.4	-
HCM Lane LOS	-	-	E	B	-
HCM 95th %tile Q(veh)	-	-	4.2	0.1	-

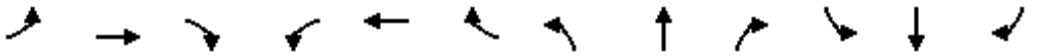
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	135	354	82	56	230	72	833	155	884
Future Volume (vph)	135	354	82	56	230	72	833	155	884
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	29.8	29.8	29.8	30.8	30.8	14.5	27.8	14.5	27.8
Total Split (s)	33.0	33.0	33.0	33.0	33.0	14.6	37.0	20.0	42.4
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	16.2%	41.1%	22.2%	47.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	4.6	5.8	4.6	5.8
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 75.8
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Cedar Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	354	82	56	230	133	72	833	47	155	884	90
Future Volume (veh/h)	135	354	82	56	230	133	72	833	47	155	884	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	141	369	39	58	240	97	75	868	46	161	921	87
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	313	531	445	210	708	278	93	1106	59	200	1267	120
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.06	0.34	0.34	0.12	0.40	0.40
Sat Flow, veh/h	948	1800	1506	888	2399	942	1619	3299	175	1619	3158	298
Grp Volume(v), veh/h	141	369	39	58	169	168	75	450	464	161	499	509
Grp Sat Flow(s),veh/h/ln	948	1800	1506	888	1710	1630	1619	1710	1763	1619	1710	1746
Q Serve(g_s), s	9.0	12.0	1.2	4.1	5.1	5.3	3.0	15.6	15.6	6.4	16.2	16.2
Cycle Q Clear(g_c), s	14.4	12.0	1.2	16.0	5.1	5.3	3.0	15.6	15.6	6.4	16.2	16.2
Prop In Lane	1.00		1.00	1.00		0.58	1.00		0.10	1.00		0.17
Lane Grp Cap(c), veh/h	313	531	445	210	505	481	93	573	591	200	686	701
V/C Ratio(X)	0.45	0.69	0.09	0.28	0.33	0.35	0.81	0.78	0.79	0.81	0.73	0.73
Avail Cap(c_a), veh/h	424	744	622	315	706	674	246	810	836	379	951	971
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	20.6	16.8	27.7	18.1	18.2	30.7	19.7	19.7	28.1	16.7	16.7
Incr Delay (d2), s/veh	1.0	1.6	0.1	0.7	0.4	0.4	14.9	3.4	3.3	7.4	1.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	4.6	0.4	0.8	1.8	1.8	1.5	5.8	5.9	2.6	5.5	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	22.2	16.9	28.4	18.5	18.7	45.6	23.1	23.0	35.5	18.4	18.4
LnGrp LOS	C	C	B	C	B	B	D	C	C	D	B	B
Approach Vol, veh/h		549			395			989			1169	
Approach Delay, s/veh		22.5			20.0			24.8			20.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.7	27.9		25.2	8.4	32.2		25.2				
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8				
Max Green Setting (Gmax), s	15.4	31.2		27.2	10.0	36.6		27.2				
Max Q Clear Time (g_c+I1), s	8.4	17.6		16.4	5.0	18.2		18.0				
Green Ext Time (p_c), s	0.2	4.4		2.1	0.1	5.7		1.4				

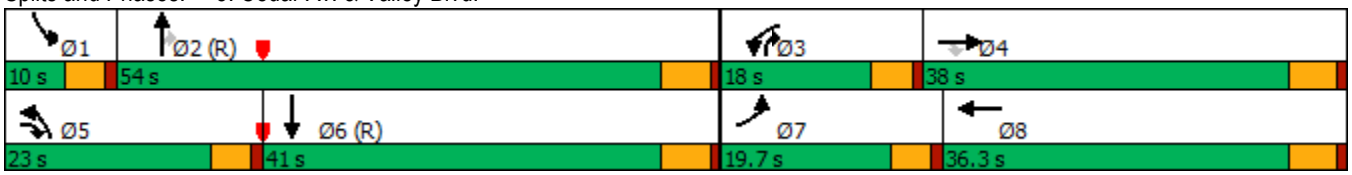
Intersection Summary			
HCM 6th Ctrl Delay		22.2	
HCM 6th LOS		C	

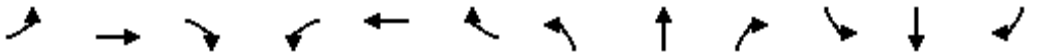
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	276	416	483	259	261	379	1191	220	95	1074
Future Volume (vph)	276	416	483	259	261	379	1191	220	95	1074
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	5	3	8	5	2	3	1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	33.4	9.6	9.6	33.4	9.6	32.4	9.6	9.6	32.4
Total Split (s)	19.7	38.0	23.0	18.0	36.3	23.0	54.0	18.0	10.0	41.0
Total Split (%)	16.4%	31.7%	19.2%	15.0%	30.3%	19.2%	45.0%	15.0%	8.3%	34.2%
Yellow Time (s)	3.6	4.4	3.6	3.6	4.4	3.6	4.4	3.6	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	4.6	5.4	4.6	5.4	4.6	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	C-Max	None	None	C-Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 98 (82%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated

Splits and Phases: 5: Cedar Av. & Valley Blvd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	276	416	483	259	261	71	379	1191	220	95	1074	81
Future Volume (veh/h)	276	416	483	259	261	71	379	1191	220	95	1074	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	288	433	352	270	272	62	395	1241	150	99	1119	78
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	336	467	1094	316	701	157	440	1442	795	133	1491	104
Arrive On Green	0.11	0.26	0.26	0.11	0.25	0.25	0.15	0.42	0.42	0.05	0.32	0.32
Sat Flow, veh/h	2956	1800	2675	2956	2774	622	2956	3420	1499	2956	4690	327
Grp Volume(v), veh/h	288	433	352	270	166	168	395	1241	150	99	781	416
Grp Sat Flow(s),veh/h/ln	1478	1800	1338	1478	1710	1685	1478	1710	1499	1478	1638	1741
Q Serve(g_s), s	11.5	28.1	10.8	10.8	9.6	9.9	15.8	39.5	6.3	4.0	25.6	25.7
Cycle Q Clear(g_c), s	11.5	28.1	10.8	10.8	9.6	9.9	15.8	39.5	6.3	4.0	25.6	25.7
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	336	467	1094	316	432	426	440	1442	795	133	1041	553
V/C Ratio(X)	0.86	0.93	0.32	0.85	0.38	0.39	0.90	0.86	0.19	0.74	0.75	0.75
Avail Cap(c_a), veh/h	372	489	1126	330	440	434	453	1442	795	133	1041	553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.72	0.72	0.72
Uniform Delay (d), s/veh	52.2	43.3	24.2	52.7	37.1	37.2	50.2	31.5	14.8	56.6	36.7	36.7
Incr Delay (d2), s/veh	16.5	23.3	0.2	18.6	0.6	0.6	20.0	6.9	0.5	15.0	3.6	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	15.2	3.3	4.7	4.0	4.1	6.9	16.9	2.2	1.7	10.5	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.7	66.6	24.3	71.2	37.6	37.8	70.2	38.4	15.3	71.6	40.3	43.3
LnGrp LOS	E	E	C	E	D	D	E	D	B	E	D	D
Approach Vol, veh/h		1073			604			1786			1296	
Approach Delay, s/veh		53.3			52.7			43.5			43.7	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	56.0	17.4	36.6	22.5	43.5	18.2	35.7
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Max Green Setting (Gmax), s	5.4	48.6	13.4	32.6	18.4	35.6	15.1	30.9
Max Q Clear Time (g_c+I1), s	6.0	41.5	12.8	30.1	17.8	27.7	13.5	11.9
Green Ext Time (p_c), s	0.0	4.6	0.1	1.0	0.1	4.4	0.2	1.7

Intersection Summary	
HCM 6th Ctrl Delay	46.9
HCM 6th LOS	D

Notes

User approved changes to right turn type.

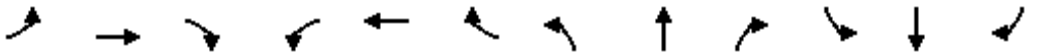
Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	438	175	1351	1229	587
Future Volume (vph)	2	438	175	1351	1229	587
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	14.6	27.4	25.4	25.4
Total Split (s)	39.0	39.0	29.0	81.0	52.0	52.0
Total Split (%)	32.5%	32.5%	24.2%	67.5%	43.3%	43.3%
Yellow Time (s)	4.1	4.1	3.6	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	4.6	5.4	5.4	5.4
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 107 (89%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 6: Cedar Av. & I-10 WB





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	264	2	438	175	1351	0	0	1229	587
Future Volume (veh/h)	0	0	0	264	2	438	175	1351	0	0	1229	587
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				281	123	364	186	1437	0	0	1307	419
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				324	142	403	214	2378	0	0	2606	808
Arrive On Green				0.25	0.25	0.25	0.24	1.00	0.00	0.00	0.50	0.50
Sat Flow, veh/h				1277	559	1589	1810	3705	0	0	5358	1609
Grp Volume(v), veh/h				404	0	364	186	1437	0	0	1307	419
Grp Sat Flow(s),veh/h/ln				1836	0	1589	1810	1805	0	0	1729	1609
Q Serve(g_s), s				25.3	0.0	26.6	11.9	0.0	0.0	0.0	20.1	21.0
Cycle Q Clear(g_c), s				25.3	0.0	26.6	11.9	0.0	0.0	0.0	20.1	21.0
Prop In Lane				0.70		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				466	0	403	214	2378	0	0	2606	808
V/C Ratio(X)				0.87	0.00	0.90	0.87	0.60	0.00	0.00	0.50	0.52
Avail Cap(c_a), veh/h				519	0	449	368	2378	0	0	2606	808
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.67	0.67	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				42.8	0.0	43.3	44.9	0.0	0.0	0.0	19.9	20.1
Incr Delay (d2), s/veh				13.4	0.0	20.0	7.5	0.8	0.0	0.0	0.7	2.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				13.0	0.0	12.5	5.1	0.3	0.0	0.0	7.8	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				56.3	0.0	63.3	52.5	0.8	0.0	0.0	20.6	22.5
LnGrp LOS				E	A	E	D	A	A	A	C	C
Approach Vol, veh/h					768			1623			1726	
Approach Delay, s/veh					59.6			6.7			21.0	
Approach LOS					E			A			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	84.4		18.8	65.7		35.6						
Change Period (Y+Rc), s	5.4		4.6	5.4		5.1						
Max Green Setting (Gmax), s	75.6		24.4	46.6		33.9						
Max Q Clear Time (g_c+I1), s	2.0		13.9	23.0		28.6						
Green Ext Time (p_c), s	16.0		0.3	11.3		1.9						

Intersection Summary		
HCM 6th Ctrl Delay	22.6	
HCM 6th LOS	C	

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

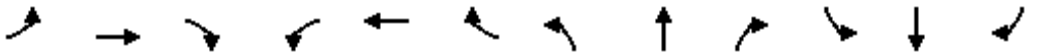
Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	576	7	951	343	412	1081
Future Volume (vph)	576	7	951	343	412	1081
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	4.0
Minimum Split (s)	20.0	20.0	30.4	30.4	14.5	25.4
Total Split (s)	40.0	40.0	46.0	46.0	34.0	80.0
Total Split (%)	33.3%	33.3%	38.3%	38.3%	28.3%	66.7%
Yellow Time (s)	4.1	4.1	4.4	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.4	5.4	4.6	5.4
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 90 (75%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 7: Cedar Av. & I-10 EB





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	576	7	186	0	0	0	0	951	343	412	1081	0
Future Volume (veh/h)	576	7	186	0	0	0	0	951	343	412	1081	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1876	1876	1900	1900	0
Adj Flow Rate, veh/h	403	302	185				0	1012	195	438	1150	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	521	318	195				0	1748	535	443	2254	0
Arrive On Green	0.29	0.29	0.29				0.00	0.34	0.34	0.49	1.00	0.00
Sat Flow, veh/h	1810	1103	676				0	5292	1567	1810	3705	0
Grp Volume(v), veh/h	403	0	487				0	1012	195	438	1150	0
Grp Sat Flow(s),veh/h/ln	1810	0	1778				0	1708	1567	1810	1805	0
Q Serve(g_s), s	24.5	0.0	32.2				0.0	19.5	11.2	28.7	0.0	0.0
Cycle Q Clear(g_c), s	24.5	0.0	32.2				0.0	19.5	11.2	28.7	0.0	0.0
Prop In Lane	1.00		0.38				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	521	0	512				0	1748	535	443	2254	0
V/C Ratio(X)	0.77	0.00	0.95				0.00	0.58	0.36	0.99	0.51	0.00
Avail Cap(c_a), veh/h	526	0	517				0	1748	535	443	2254	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.83	0.83	0.00
Uniform Delay (d), s/veh	39.1	0.0	41.9				0.0	32.5	29.7	30.4	0.0	0.0
Incr Delay (d2), s/veh	7.0	0.0	27.5				0.0	1.4	1.9	35.7	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	0.0	17.8				0.0	8.1	4.4	13.2	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	0.0	69.4				0.0	33.9	31.7	66.2	0.7	0.0
LnGrp LOS	D	A	E				A	C	C	E	A	A
Approach Vol, veh/h		890						1207			1588	
Approach Delay, s/veh		58.8						33.5			18.7	
Approach LOS		E						C			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	34.0	46.3		39.7		80.3
Change Period (Y+Rc), s	4.6	5.4		5.1		5.4
Max Green Setting (Gmax), s	29.4	40.6		34.9		74.6
Max Q Clear Time (g_c+I1), s	30.7	21.5		34.2		2.0
Green Ext Time (p_c), s	0.0	7.3		0.3		10.7

Intersection Summary			
HCM 6th Ctrl Delay			33.3
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	22	89	0	0	73
Future Vol, veh/h	20	22	89	0	0	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	22	24	97	0	0	79

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	97	0	-	0	165	97
Stage 1	-	-	-	-	97	-
Stage 2	-	-	-	-	68	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1509	-	-	-	830	965
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	960	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1509	-	-	-	818	965
Mov Cap-2 Maneuver	-	-	-	-	818	-
Stage 1	-	-	-	-	918	-
Stage 2	-	-	-	-	960	-

Approach	EB	WB	SB
HCM Control Delay, s	3.5	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1509	-	-	-	965
HCM Lane V/C Ratio	0.014	-	-	-	0.082
HCM Control Delay (s)	7.4	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3

APPENDIX 5.2:

EAP (2023) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

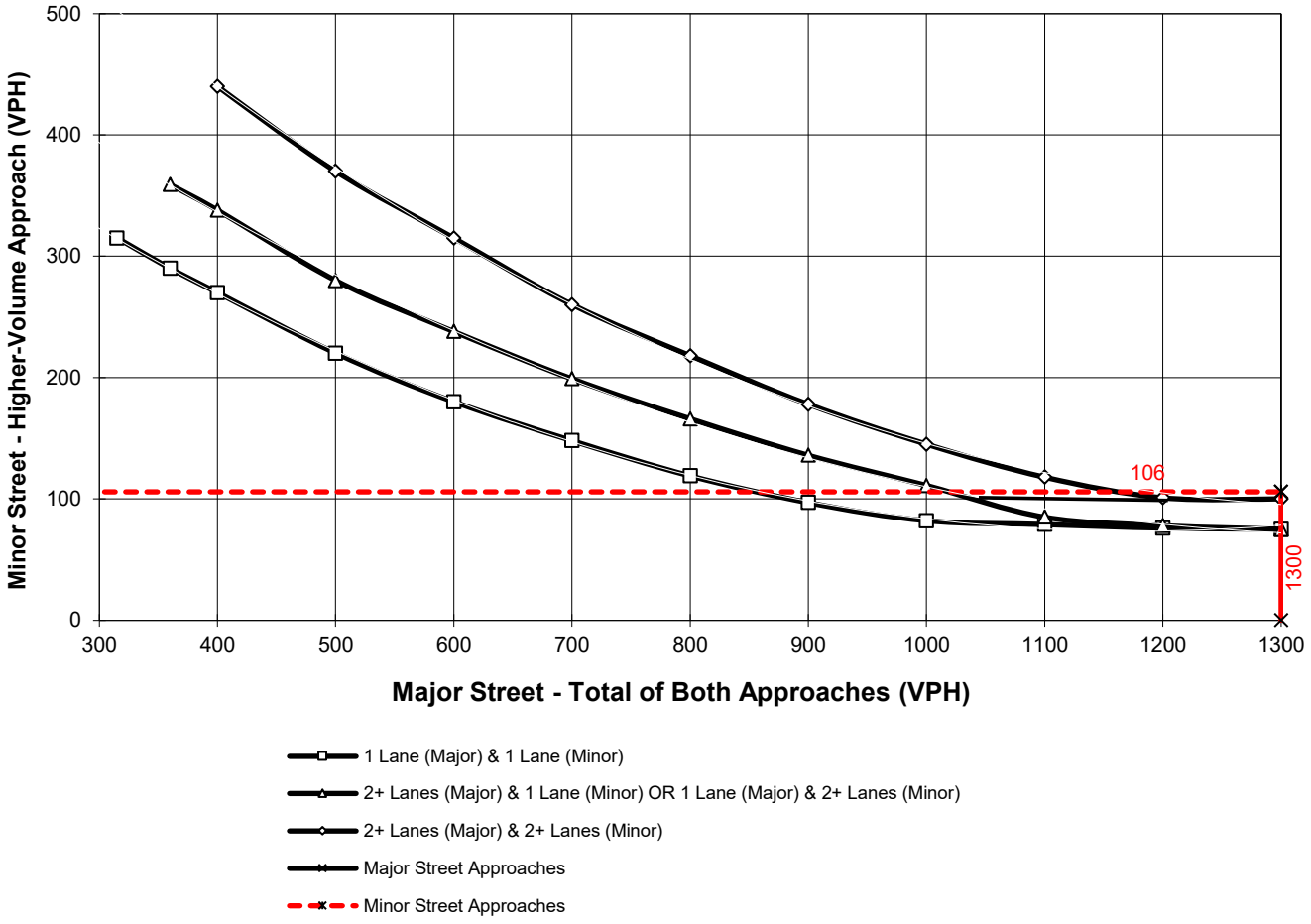
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **2023 EAP Conditions - Weekday PM Peak Hour**

Major Street Name = **Cedar Avenue**
Total of Both Approaches (VPH) = **2075**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Durst Drive**
High Volume Approach (VPH) = **106**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	EAP
				CALC MT	DATE 11/02/21
Jurisdiction: City of Rialto				CHK MT	DATE 11/02/21
Major Street: Durst Drive				Critical Approach Speed (Major)	45 mph
Minor Street: Driveway 3				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **1,417** vpd Minor Street Future ADT = **248** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ..... √

or

In built up area of isolated community of < 10,000 population .....

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 **1,417** / 1 **248**	8,000	5,600	2,400	1,680
2 + / 1	9,600	6,720	2,400	1,680
2 + / 2 +	9,600	6,720	3,200	2,240
1 / 2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 **1,417** / 1 **248**	12,000	8,400	1,200	850
2 + / 1	14,400	10,080	1,200	850
2 + / 2 +	14,400	10,080	1,600	1,120
1 / 2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ..... A: 15% B: 17%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

APPENDIX 5.3:

EAP (2023) CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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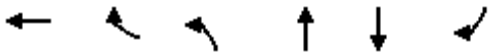


Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	500	391	279	1339	1396	691
v/c Ratio	0.93	0.75	0.80	0.63	0.76	0.68
Control Delay	60.6	37.1	48.8	5.6	31.1	6.0
Queue Delay	52.3	0.0	0.0	2.7	5.9	0.3
Total Delay	112.9	37.1	48.8	8.3	37.0	6.3
Queue Length 50th (ft)	348	211	126	50	359	44
Queue Length 95th (ft)	#556	335	m149	75	426	m21
Internal Link Dist (ft)	921			330	170	
Turn Bay Length (ft)		530				
Base Capacity (vph)	559	540	416	2126	1834	1017
Starvation Cap Reductn	0	0	0	641	0	55
Spillback Cap Reductn	247	0	0	35	384	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.60	0.72	0.67	0.90	0.96	0.72

Intersection Summary

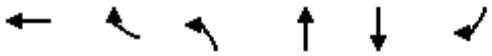
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	460	425	1091	429	442	1389
v/c Ratio	0.87	0.83	0.76	0.57	0.90	0.65
Control Delay	53.4	46.7	41.6	6.8	46.5	33.5
Queue Delay	0.0	0.0	0.0	0.0	16.1	49.5
Total Delay	53.4	46.7	41.6	6.8	62.6	83.1
Queue Length 50th (ft)	308	256	276	0	301	555
Queue Length 95th (ft)	#477	#400	#358	85	m#431	m628
Internal Link Dist (ft)		1189	666			330
Turn Bay Length (ft)	400			575		
Base Capacity (vph)	575	550	1441	750	531	2150
Starvation Cap Reductn	0	0	0	0	84	1081
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.77	0.76	0.57	0.99	1.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	390	359	186	1437	1307	624
v/c Ratio	0.88	0.82	0.70	0.61	0.54	0.58
Control Delay	62.4	49.5	81.4	11.0	17.7	2.4
Queue Delay	52.9	0.0	0.0	0.3	0.2	0.4
Total Delay	115.3	49.5	81.4	11.3	17.9	2.8
Queue Length 50th (ft)	283	221	155	123	143	15
Queue Length 95th (ft)	#449	#352	m194	183	249	m20
Internal Link Dist (ft)	921			330	170	
Turn Bay Length (ft)		530				
Base Capacity (vph)	482	474	367	2362	2431	1078
Starvation Cap Reductn	0	0	0	317	396	125
Spillback Cap Reductn	127	0	0	47	86	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.76	0.51	0.70	0.64	0.65

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	423	395	1012	365	438	1150
v/c Ratio	0.87	0.80	0.61	0.48	0.90	0.51
Control Delay	60.5	48.8	36.4	5.3	72.8	18.8
Queue Delay	0.0	0.0	0.0	0.0	48.3	1.2
Total Delay	60.5	48.8	36.4	5.3	121.1	20.0
Queue Length 50th (ft)	316	260	254	0	364	240
Queue Length 95th (ft)	#505	#422	282	65	m#565	334
Internal Link Dist (ft)		1189	666			330
Turn Bay Length (ft)	400			575		
Base Capacity (vph)	511	516	1775	783	485	2302
Starvation Cap Reductn	0	0	0	0	94	855
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.77	0.57	0.47	1.12	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX 5.4:

EAP (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	27	940	48	1178
Future Volume (vph)	27	940	48	1178
Turn Type	Prot	NA	Prot	NA
Protected Phases	8	2	1	6
Permitted Phases				
Detector Phase	8	2	1	6
Switch Phase				
Minimum Initial (s)	10.0	10.0	10.0	10.0
Minimum Split (s)	21.5	21.5	14.5	21.5
Total Split (s)	21.6	33.8	14.6	48.4
Total Split (%)	30.9%	48.3%	20.9%	69.1%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	None	Min	None	Min

Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 47.3
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Cedar Av. & Durst Dr





Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	27	9	940	88	48	1178	
Future Volume (veh/h)	27	9	940	88	48	1178	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	0.99		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No		No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1800	1700	1800	
Adj Flow Rate, veh/h	30	10	1033	97	53	1295	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	105	35	1471	138	179	2350	
Arrive On Green	0.09	0.09	0.47	0.47	0.11	0.69	
Sat Flow, veh/h	1147	382	3250	297	1619	3510	
Grp Volume(v), veh/h	41	0	559	571	53	1295	
Grp Sat Flow(s),veh/h/ln	1568	0	1710	1747	1619	1710	
Q Serve(g_s), s	1.0	0.0	10.5	10.5	1.2	7.7	
Cycle Q Clear(g_c), s	1.0	0.0	10.5	10.5	1.2	7.7	
Prop In Lane	0.73	0.24		0.17	1.00		
Lane Grp Cap(c), veh/h	143	0	796	813	179	2350	
V/C Ratio(X)	0.29	0.00	0.70	0.70	0.30	0.55	
Avail Cap(c_a), veh/h	660	0	1234	1260	403	3698	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	17.2	0.0	8.6	8.6	16.6	3.2	
Incr Delay (d2), s/veh	1.1	0.0	1.1	1.1	0.9	0.2	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.4	0.0	2.3	2.3	0.4	0.1	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	18.3	0.0	9.8	9.7	17.5	3.4	
LnGrp LOS	B	A	A	A	B	A	
Approach Vol, veh/h	41		1130			1348	
Approach Delay, s/veh	18.3		9.7			4.0	
Approach LOS	B		A			A	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	9.0	23.4			32.4	8.2
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	10.1	29.3			43.9	17.1
Max Q Clear Time (g_c+I1), s	3.2	12.5			9.7	3.0
Green Ext Time (p_c), s	0.0	6.4			11.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	6.8
HCM 6th LOS	A

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	115	1115	17	1042
Future Volume (vph)	115	1115	17	1042
Turn Type	Prot	NA	Prot	NA
Protected Phases	8	2	1	6
Permitted Phases				
Detector Phase	8	2	1	6
Switch Phase				
Minimum Initial (s)	10.0	10.0	10.0	10.0
Minimum Split (s)	21.5	21.5	14.5	21.5
Total Split (s)	21.8	33.6	14.6	48.2
Total Split (%)	31.1%	48.0%	20.9%	68.9%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	None	Min	None	Min

Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 47.9
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Cedar Av. & Durst Dr





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	115	47	1115	25	17	1042
Future Volume (veh/h)	115	47	1115	25	17	1042
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1700	1800	1800	1800	1700	1800
Adj Flow Rate, veh/h	121	49	1174	26	18	1097
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	216	87	1583	35	72	2075
Arrive On Green	0.19	0.19	0.46	0.46	0.04	0.61
Sat Flow, veh/h	1107	448	3510	76	1619	3510
Grp Volume(v), veh/h	171	0	587	613	18	1097
Grp Sat Flow(s),veh/h/ln	1564	0	1710	1786	1619	1710
Q Serve(g_s), s	4.5	0.0	12.7	12.7	0.5	8.4
Cycle Q Clear(g_c), s	4.5	0.0	12.7	12.7	0.5	8.4
Prop In Lane	0.71	0.29		0.04	1.00	
Lane Grp Cap(c), veh/h	305	0	792	827	72	2075
V/C Ratio(X)	0.56	0.00	0.74	0.74	0.25	0.53
Avail Cap(c_a), veh/h	596	0	1097	1145	360	3294
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	0.0	10.0	10.0	20.9	5.2
Incr Delay (d2), s/veh	1.6	0.0	1.7	1.7	1.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	3.2	3.4	0.2	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.1	0.0	11.7	11.6	22.7	5.4
LnGrp LOS	B	A	B	B	C	A
Approach Vol, veh/h	171		1200			1115
Approach Delay, s/veh	18.1		11.7			5.7
Approach LOS	B		B			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.5	25.5			32.0	13.3
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	10.1	29.1			43.7	17.3
Max Q Clear Time (g_c+I1), s	2.5	14.7			10.4	6.5
Green Ext Time (p_c), s	0.0	6.3			8.6	0.3

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

APPENDIX 6.1:

EAC (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Volume Development - AM Peak Hour

1: Cedar Av. & Driveway 1

	PHF:	0.920		7:00					Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAC	0	1,017	0	0	1,316	0	0	0	0	0	0	0	2,334

2: Cedar Av. & Driveway 2

	PHF:	0.920		7:00					Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAC	0	1,017	0	0	1,316	0	0	0	0	0	0	0	2,334

3: Cedar Av. & Durst Dr.

	PHF:	0.907		7:30					Count Date:		10/7/2021	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAC	0	1,013	57	22	1,294	0	0	0	0	11	0	5	2,401

4: Cedar Av. & Merrill Av.

	PHF:	0.889		7:30					Count Date:		10/7/2021	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAC	94	758	79	186	941	89	132	202	59	105	272	105	3,022

5: Cedar Av. & Valley Blvd.

	PHF:	0.929		7:00					Count Date:		10/7/2021	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAC	383	1,216	329	50	1,340	23	59	162	571	406	251	37	4,828

6: Cedar Av. & I-10 WB

	PHF:	0.974		7:00					Count Date:		10/7/2021	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAC	557	1,517	0	0	1,616	701	0	0	0	732	2	410	5,535

7: Cedar Av. & I-10 EB

	PHF:	0.983		7:00					Count Date:		10/7/2021	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAC	0	1,471	664	432	1,915	0	604	4	793	0	0	0	5,883

8: Driveway 3 & Durst Dr.

	PHF:	0.920		7:00					Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAC	0	0	0	0	0	0	0	79	0	0	16	0	94

Volume Development - PM Peak Hour

1: Cedar Av. & Driveway 1

	PHF:	0.920		4:30						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAC	0	1,259	0	0	1,160	0	0	0	0	0	0	0	2,420

2: Cedar Av. & Driveway 2

	PHF:	0.920		4:00						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAC	0	1,259	0	0	1,160	0	0	0	0	0	0	0	2,420

3: Cedar Av. & Durst Dr.

	PHF:	0.950		4:00						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAC	0	1,228	14	8	1,153	0	0	0	0	58	0	31	2,491

4: Cedar Av. & Merrill Av.

	PHF:	0.960		4:30						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAC	109	937	83	153	940	88	134	354	112	86	231	132	3,359

5: Cedar Av. & Valley Blvd.

	PHF:	0.963		4:00						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAC	439	1,369	290	97	1,191	81	276	418	532	334	263	73	5,360

6: Cedar Av. & I-10 WB

	PHF:	0.937		4:15						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAC	696	1,661	0	0	1,366	691	0	0	0	547	2	436	5,399

7: Cedar Av. & I-10 EB

	PHF:	0.942		4:30						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAC	0	1,745	776	400	1,512	0	613	7	473	0	0	0	5,526

8: Driveway 3 & Durst Dr.

	PHF:	0.920		4:00						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAC	0	0	0	0	0	0	0	22	0	0	89	0	111

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	5	1013	57	22	1294
Future Vol, veh/h	11	5	1013	57	22	1294
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	12	5	1113	63	24	1422

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1904	588	0	0	1176	0
Stage 1	1145	-	-	-	-	-
Stage 2	759	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	62	457	-	-	601	-
Stage 1	270	-	-	-	-	-
Stage 2	428	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	60	457	-	-	601	-
Mov Cap-2 Maneuver	220	-	-	-	-	-
Stage 1	270	-	-	-	-	-
Stage 2	411	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.7	0	0.2
HCM LOS	C		

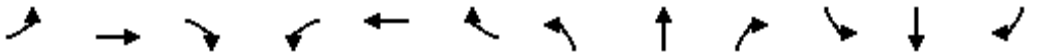
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	263	601	-
HCM Lane V/C Ratio	-	-	0.067	0.04	-
HCM Control Delay (s)	-	-	19.7	11.2	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	132	202	59	105	272	94	758	186	941
Future Volume (vph)	132	202	59	105	272	94	758	186	941
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	29.8	29.8	29.8	30.8	30.8	14.5	27.8	14.5	27.8
Total Split (s)	33.0	33.0	33.0	33.0	33.0	14.6	35.0	22.0	42.4
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	16.2%	38.9%	24.4%	47.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	4.6	5.8	4.6	5.8
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 77.3
Natural Cycle: 80
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Cedar Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	202	59	105	272	105	94	758	79	186	941	89
Future Volume (veh/h)	132	202	59	105	272	105	94	758	79	186	941	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	148	227	39	118	306	66	106	852	47	209	1057	88
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	285	522	441	289	813	173	132	1087	60	250	1288	107
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.08	0.33	0.33	0.15	0.40	0.40
Sat Flow, veh/h	917	1800	1521	1010	2805	596	1619	3294	182	1619	3196	266
Grp Volume(v), veh/h	148	227	39	118	185	187	106	442	457	209	565	580
Grp Sat Flow(s),veh/h/ln	917	1800	1521	1010	1710	1691	1619	1710	1766	1619	1710	1752
Q Serve(g_s), s	11.0	7.4	1.3	7.7	6.2	6.3	4.6	16.8	16.8	9.0	21.2	21.2
Cycle Q Clear(g_c), s	17.4	7.4	1.3	15.1	6.2	6.3	4.6	16.8	16.8	9.0	21.2	21.2
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.10	1.00		0.15
Lane Grp Cap(c), veh/h	285	522	441	289	496	490	132	564	583	250	689	706
V/C Ratio(X)	0.52	0.44	0.09	0.41	0.37	0.38	0.80	0.78	0.78	0.83	0.82	0.82
Avail Cap(c_a), veh/h	366	681	576	379	647	640	225	695	718	392	871	893
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	20.7	18.6	26.9	20.3	20.4	32.4	21.7	21.7	29.5	19.1	19.1
Incr Delay (d2), s/veh	1.5	0.6	0.1	0.9	0.5	0.5	10.5	4.7	4.6	8.7	5.1	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.8	0.4	1.8	2.3	2.3	2.1	6.6	6.8	3.8	8.0	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.8	21.3	18.7	27.8	20.8	20.9	42.9	26.5	26.3	38.2	24.2	24.1
LnGrp LOS	C	C	B	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h		414			490			1005			1354	
Approach Delay, s/veh		23.7			22.5			28.2			26.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.7	29.5		26.6	10.5	34.7		26.6				
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8				
Max Green Setting (Gmax), s	17.4	29.2		27.2	10.0	36.6		27.2				
Max Q Clear Time (g_c+I1), s	11.0	18.8		19.4	6.6	23.2		17.1				
Green Ext Time (p_c), s	0.3	3.8		1.3	0.1	5.7		1.8				

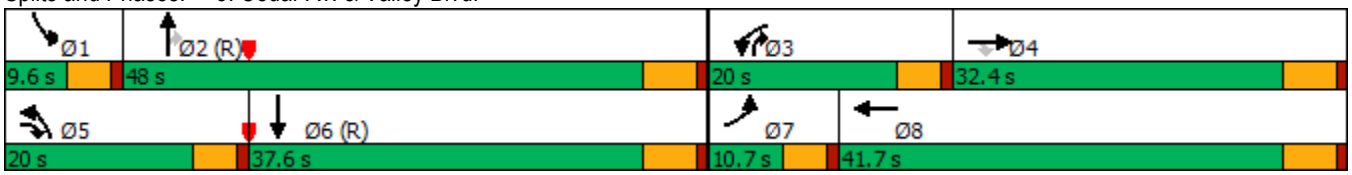
Intersection Summary			
HCM 6th Ctrl Delay		26.0	
HCM 6th LOS		C	

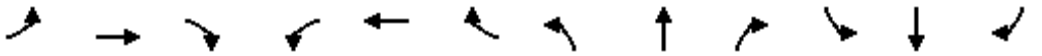
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	59	162	571	406	251	383	1216	329	50	1340
Future Volume (vph)	59	162	571	406	251	383	1216	329	50	1340
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	5	3	8	5	2	3	1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	32.4	9.6	9.6	32.4	9.6	32.4	9.6	9.6	32.4
Total Split (s)	10.7	32.4	20.0	20.0	41.7	20.0	48.0	20.0	9.6	37.6
Total Split (%)	9.7%	29.5%	18.2%	18.2%	37.9%	18.2%	43.6%	18.2%	8.7%	34.2%
Yellow Time (s)	3.6	4.4	3.6	3.6	4.4	3.6	4.4	3.6	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	4.6	5.4	4.6	5.4	4.6	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 49 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 5: Cedar Av. & Valley Blvd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	162	571	406	251	37	383	1216	329	50	1340	23
Future Volume (veh/h)	59	162	571	406	251	37	383	1216	329	50	1340	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	63	174	419	437	270	28	412	1308	267	54	1441	24
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	115	301	825	414	840	86	414	1622	928	109	1847	31
Arrive On Green	0.04	0.17	0.17	0.14	0.27	0.27	0.14	0.47	0.47	0.04	0.37	0.37
Sat Flow, veh/h	2956	1800	2685	2956	3129	322	2956	3420	1506	2956	4978	83
Grp Volume(v), veh/h	63	174	419	437	146	152	412	1308	267	54	948	517
Grp Sat Flow(s),veh/h/ln	1478	1800	1342	1478	1710	1741	1478	1710	1506	1478	1638	1785
Q Serve(g_s), s	2.3	9.8	14.1	15.4	7.5	7.7	15.3	35.8	9.1	2.0	28.2	28.2
Cycle Q Clear(g_c), s	2.3	9.8	14.1	15.4	7.5	7.7	15.3	35.8	9.1	2.0	28.2	28.2
Prop In Lane	1.00		1.00	1.00		0.18	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	115	301	825	414	459	467	414	1622	928	109	1216	662
V/C Ratio(X)	0.55	0.58	0.51	1.06	0.32	0.32	1.00	0.81	0.29	0.50	0.78	0.78
Avail Cap(c_a), veh/h	164	442	1035	414	564	575	414	1622	928	134	1216	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.64	0.64	0.64
Uniform Delay (d), s/veh	51.9	42.2	31.3	47.3	32.2	32.3	47.3	24.6	9.9	52.0	30.6	30.6
Incr Delay (d2), s/veh	4.0	1.8	0.5	59.7	0.4	0.4	43.0	4.4	0.8	2.2	3.3	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.4	4.5	9.0	3.1	3.2	8.0	14.5	2.9	0.8	11.2	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.0	44.0	31.8	107.0	32.6	32.7	90.2	29.0	10.7	54.2	33.9	36.4
LnGrp LOS	E	D	C	F	C	C	F	C	B	D	C	D
Approach Vol, veh/h		656			735			1987			1519	
Approach Delay, s/veh		37.3			76.9			39.2			35.5	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	57.6	20.0	23.8	20.0	46.2	8.9	34.9
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Max Green Setting (Gmax), s	5.0	42.6	15.4	27.0	15.4	32.2	6.1	36.3
Max Q Clear Time (g_c+I1), s	4.0	37.8	17.4	16.1	17.3	30.2	4.3	9.7
Green Ext Time (p_c), s	0.0	3.5	0.0	2.0	0.0	1.5	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	43.5
HCM 6th LOS	D

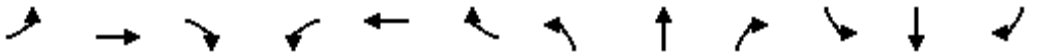
Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	410	557	1517	1616	701
Future Volume (vph)	2	410	557	1517	1616	701
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	14.6	27.4	25.4	25.4
Total Split (s)	41.0	41.0	30.0	69.0	39.0	39.0
Total Split (%)	37.3%	37.3%	27.3%	62.7%	35.5%	35.5%
Yellow Time (s)	4.1	4.1	3.6	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	4.6	5.4	5.4	5.4
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 64 (58%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 6: Cedar Av. & I-10 WB





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	732	2	410	557	1517	0	0	1616	701
Future Volume (veh/h)	0	0	0	732	2	410	557	1517	0	0	1616	701
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				755	2	295	574	1564	0	0	1666	444
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				589	2	519	418	2087	0	0	1584	492
Arrive On Green				0.33	0.33	0.33	0.08	0.19	0.00	0.00	0.31	0.31
Sat Flow, veh/h				1805	5	1590	1810	3705	0	0	5358	1610
Grp Volume(v), veh/h				757	0	295	574	1564	0	0	1666	444
Grp Sat Flow(s),veh/h/ln				1810	0	1590	1810	1805	0	0	1729	1610
Q Serve(g_s), s				35.9	0.0	16.9	25.4	45.0	0.0	0.0	33.6	29.1
Cycle Q Clear(g_c), s				35.9	0.0	16.9	25.4	45.0	0.0	0.0	33.6	29.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				591	0	519	418	2087	0	0	1584	492
V/C Ratio(X)				1.28	0.00	0.57	1.37	0.75	0.00	0.00	1.05	0.90
Avail Cap(c_a), veh/h				591	0	519	418	2087	0	0	1584	492
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.1	0.0	30.6	50.8	37.0	0.0	0.0	38.2	36.6
Incr Delay (d2), s/veh				139.4	0.0	1.5	169.6	0.2	0.0	0.0	37.5	22.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				38.2	0.0	6.5	32.0	21.6	0.0	0.0	18.9	13.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				176.4	0.0	32.1	220.4	37.2	0.0	0.0	75.7	59.1
LnGrp LOS				F	A	C	F	D	A	A	F	E
Approach Vol, veh/h					1052			2138			2110	
Approach Delay, s/veh					135.9			86.4			72.2	
Approach LOS					F			F			E	

Timer - Assigned Phs	2			5	6		8					
Phs Duration (G+Y+Rc), s	69.0			30.0	39.0		41.0					
Change Period (Y+Rc), s	5.4			4.6	5.4		5.1					
Max Green Setting (Gmax), s	63.6			25.4	33.6		35.9					
Max Q Clear Time (g_c+I1), s	47.0			27.4	35.6		37.9					
Green Ext Time (p_c), s	10.2			0.0	0.0		0.0					

Intersection Summary		
HCM 6th Ctrl Delay	90.6	
HCM 6th LOS	F	

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	604	4	1471	664	432	1915
Future Volume (vph)	604	4	1471	664	432	1915
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	4.0
Minimum Split (s)	20.0	20.0	30.4	30.4	14.5	25.4
Total Split (s)	42.0	42.0	31.0	31.0	37.0	68.0
Total Split (%)	38.2%	38.2%	28.2%	28.2%	33.6%	61.8%
Yellow Time (s)	4.1	4.1	4.4	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.4	5.4	4.6	5.4
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 35 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 7: Cedar Av. & I-10 EB



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	604	4	793	0	0	0	0	1471	664	432	1915	0
Future Volume (veh/h)	604	4	793	0	0	0	0	1471	664	432	1915	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1876	1876	1900	1900	0
Adj Flow Rate, veh/h	616	4	776				0	1501	490	441	1954	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	607	3	538				0	1343	416	480	2054	0
Arrive On Green	0.34	0.34	0.34				0.00	0.26	0.26	0.09	0.19	0.00
Sat Flow, veh/h	1810	8	1603				0	5292	1587	1810	3705	0
Grp Volume(v), veh/h	616	0	780				0	1501	490	441	1954	0
Grp Sat Flow(s),veh/h/ln	1810	0	1611				0	1708	1587	1810	1805	0
Q Serve(g_s), s	36.9	0.0	36.9				0.0	28.8	28.8	26.6	58.9	0.0
Cycle Q Clear(g_c), s	36.9	0.0	36.9				0.0	28.8	28.8	26.6	58.9	0.0
Prop In Lane	1.00		0.99				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	607	0	541				0	1343	416	480	2054	0
V/C Ratio(X)	1.01	0.00	1.44				0.00	1.12	1.18	0.92	0.95	0.00
Avail Cap(c_a), veh/h	607	0	541				0	1343	416	533	2054	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.09	0.09	0.00
Uniform Delay (d), s/veh	36.6	0.0	36.6				0.0	40.6	40.6	49.0	43.2	0.0
Incr Delay (d2), s/veh	40.3	0.0	209.6				0.0	63.4	102.4	2.6	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.5	0.0	45.5				0.0	19.5	22.7	13.2	28.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.8	0.0	246.2				0.0	104.0	143.0	51.6	44.6	0.0
LnGrp LOS	F	A	F				A	F	F	D	D	A
Approach Vol, veh/h		1396						1991			2395	
Approach Delay, s/veh		171.5						113.6			45.9	
Approach LOS		F						F			D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	33.8	34.2		42.0		68.0
Change Period (Y+Rc), s	4.6	5.4		5.1		5.4
Max Green Setting (Gmax), s	32.4	25.6		36.9		62.6
Max Q Clear Time (g_c+I1), s	28.6	30.8		38.9		60.9
Green Ext Time (p_c), s	0.6	0.0		0.0		1.6

Intersection Summary		
HCM 6th Ctrl Delay		99.5
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	58	31	1228	14	8	1153
Future Vol, veh/h	58	31	1228	14	8	1153
Conflicting Peds, #/hr	0	0	0	8	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	61	33	1293	15	8	1214

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1932	662	0	0	1316	0
Stage 1	1309	-	-	-	-	-
Stage 2	623	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 59	409	-	-	532	-
Stage 1	221	-	-	-	-	-
Stage 2	503	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 58	406	-	-	528	-
Mov Cap-2 Maneuver	194	-	-	-	-	-
Stage 1	219	-	-	-	-	-
Stage 2	495	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.8	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	237	528	-
HCM Lane V/C Ratio	-	-	0.395	0.016	-
HCM Control Delay (s)	-	-	29.8	11.9	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	1.8	0	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	134	354	112	86	231	109	937	153	940
Future Volume (vph)	134	354	112	86	231	109	937	153	940
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	29.8	29.8	29.8	30.8	30.8	14.5	27.8	14.5	27.8
Total Split (s)	33.0	33.0	33.0	33.0	33.0	14.6	37.0	20.0	42.4
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	16.2%	41.1%	22.2%	47.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	4.6	5.8	4.6	5.8
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 79.3
Natural Cycle: 80
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Cedar Av. & Merrill Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	354	112	86	231	132	109	937	83	153	940	88
Future Volume (veh/h)	134	354	112	86	231	132	109	937	83	153	940	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	140	369	71	90	241	96	114	976	83	159	979	85
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	316	565	473	211	756	293	142	1134	96	194	1238	107
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.09	0.36	0.36	0.12	0.39	0.39
Sat Flow, veh/h	948	1800	1506	863	2409	933	1619	3183	271	1619	3184	276
Grp Volume(v), veh/h	140	369	71	90	169	168	114	524	535	159	526	538
Grp Sat Flow(s),veh/h/ln	948	1800	1506	863	1710	1632	1619	1710	1744	1619	1710	1750
Q Serve(g_s), s	10.2	13.7	2.6	7.8	5.8	6.1	5.3	22.0	22.0	7.4	21.0	21.0
Cycle Q Clear(g_c), s	16.3	13.7	2.6	21.4	5.8	6.1	5.3	22.0	22.0	7.4	21.0	21.0
Prop In Lane	1.00		1.00	1.00		0.57	1.00		0.16	1.00		0.16
Lane Grp Cap(c), veh/h	316	565	473	211	537	512	142	609	621	194	665	681
V/C Ratio(X)	0.44	0.65	0.15	0.43	0.31	0.33	0.81	0.86	0.86	0.82	0.79	0.79
Avail Cap(c_a), veh/h	353	634	530	244	602	575	210	691	704	323	810	830
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	22.9	19.1	32.1	20.2	20.3	34.6	23.1	23.1	33.2	20.8	20.8
Incr Delay (d2), s/veh	1.0	2.0	0.1	1.4	0.3	0.4	13.0	9.8	9.7	8.2	4.4	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	5.5	0.8	1.6	2.1	2.1	2.5	9.4	9.6	3.1	8.0	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	24.9	19.2	33.5	20.5	20.6	47.6	32.9	32.7	41.3	25.2	25.1
LnGrp LOS	C	C	B	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h		580			427			1173			1223	
Approach Delay, s/veh		24.8			23.3			34.2			27.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.9	33.3		30.0	11.4	35.8		30.0				
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8				
Max Green Setting (Gmax), s	15.4	31.2		27.2	10.0	36.6		27.2				
Max Q Clear Time (g_c+I1), s	9.4	24.0		18.3	7.3	23.0		23.4				
Green Ext Time (p_c), s	0.2	3.5		2.0	0.1	5.3		0.8				

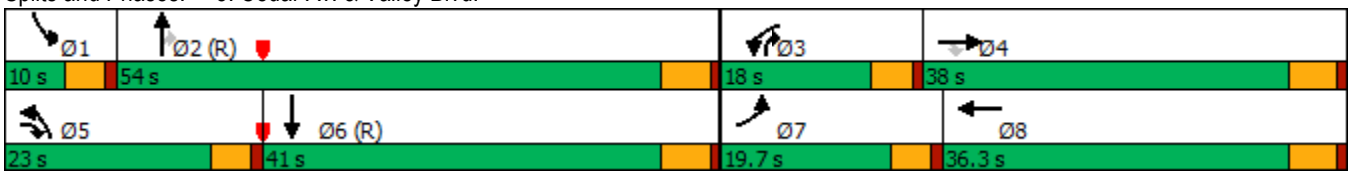
Intersection Summary			
HCM 6th Ctrl Delay		28.8	
HCM 6th LOS		C	

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	276	418	532	334	263	439	1369	290	97	1191
Future Volume (vph)	276	418	532	334	263	439	1369	290	97	1191
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	5	3	8	5	2	3	1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	33.4	9.6	9.6	33.4	9.6	32.4	9.6	9.6	32.4
Total Split (s)	19.7	38.0	23.0	18.0	36.3	23.0	54.0	18.0	10.0	41.0
Total Split (%)	16.4%	31.7%	19.2%	15.0%	30.3%	19.2%	45.0%	15.0%	8.3%	34.2%
Yellow Time (s)	3.6	4.4	3.6	3.6	4.4	3.6	4.4	3.6	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	4.6	5.4	4.6	5.4	4.6	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	C-Max	None	None	C-Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 98 (82%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated

Splits and Phases: 5: Cedar Av. & Valley Blvd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	276	418	532	334	263	73	439	1369	290	97	1191	81
Future Volume (veh/h)	276	418	532	334	263	73	439	1369	290	97	1191	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	288	435	403	348	274	64	457	1426	223	101	1241	78
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	336	469	1109	330	714	164	453	1422	794	133	1453	91
Arrive On Green	0.11	0.26	0.26	0.11	0.26	0.26	0.15	0.42	0.42	0.05	0.31	0.31
Sat Flow, veh/h	2956	1800	2675	2956	2760	634	2956	3420	1499	2956	4725	297
Grp Volume(v), veh/h	288	435	403	348	168	170	457	1426	223	101	860	459
Grp Sat Flow(s),veh/h/ln	1478	1800	1338	1478	1710	1683	1478	1710	1499	1478	1638	1746
Q Serve(g_s), s	11.5	28.3	12.5	13.4	9.7	10.0	18.4	49.9	9.9	4.1	29.6	29.6
Cycle Q Clear(g_c), s	11.5	28.3	12.5	13.4	9.7	10.0	18.4	49.9	9.9	4.1	29.6	29.6
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	336	469	1109	330	442	436	453	1422	794	133	1007	537
V/C Ratio(X)	0.86	0.93	0.36	1.05	0.38	0.39	1.01	1.00	0.28	0.76	0.85	0.85
Avail Cap(c_a), veh/h	372	489	1139	330	442	436	453	1422	794	133	1007	537
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.70	0.70	0.70
Uniform Delay (d), s/veh	52.2	43.2	24.2	53.3	36.6	36.7	50.8	35.0	15.7	56.7	39.0	39.0
Incr Delay (d2), s/veh	16.5	23.4	0.2	64.5	0.5	0.6	44.3	24.5	0.9	16.2	6.6	11.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	15.3	3.9	7.8	4.0	4.1	9.5	24.5	3.4	1.8	12.4	14.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.7	66.6	24.4	117.8	37.1	37.2	95.1	59.5	16.6	72.8	45.7	50.7
LnGrp LOS	E	E	C	F	D	D	F	F	B	E	D	D
Approach Vol, veh/h		1126			686			2106			1420	
Approach Delay, s/veh		52.1			78.1			62.7			49.2	
Approach LOS		D			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	55.3	18.0	36.7	23.0	42.3	18.2	36.5
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Max Green Setting (Gmax), s	5.4	48.6	13.4	32.6	18.4	35.6	15.1	30.9
Max Q Clear Time (g_c+I1), s	6.1	51.9	15.4	30.3	20.4	31.6	13.5	12.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.0	0.0	2.7	0.2	1.7

Intersection Summary	
HCM 6th Ctrl Delay	58.9
HCM 6th LOS	E

Notes

User approved changes to right turn type.

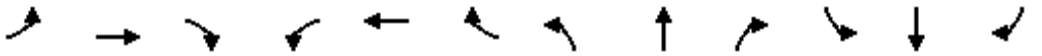
Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	436	696	1661	1366	691
Future Volume (vph)	2	436	696	1661	1366	691
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	14.6	27.4	25.4	25.4
Total Split (s)	39.0	39.0	29.0	81.0	52.0	52.0
Total Split (%)	32.5%	32.5%	24.2%	67.5%	43.3%	43.3%
Yellow Time (s)	4.1	4.1	3.6	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	4.6	5.4	5.4	5.4
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 107 (89%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated

Splits and Phases: 6: Cedar Av. & I-10 WB





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	547	2	436	696	1661	0	0	1366	691
Future Volume (veh/h)	0	0	0	547	2	436	696	1661	0	0	1366	691
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				582	2	443	740	1767	0	0	1453	530
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				510	2	449	368	2274	0	0	2014	625
Arrive On Green				0.28	0.28	0.28	0.41	1.00	0.00	0.00	0.39	0.39
Sat Flow, veh/h				1804	6	1590	1810	3705	0	0	5358	1609
Grp Volume(v), veh/h				584	0	443	740	1767	0	0	1453	530
Grp Sat Flow(s),veh/h/ln				1810	0	1590	1810	1805	0	0	1729	1609
Q Serve(g_s), s				33.9	0.0	33.3	24.4	0.0	0.0	0.0	28.6	36.1
Cycle Q Clear(g_c), s				33.9	0.0	33.3	24.4	0.0	0.0	0.0	28.6	36.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				511	0	449	368	2274	0	0	2014	625
V/C Ratio(X)				1.14	0.00	0.99	2.01	0.78	0.00	0.00	0.72	0.85
Avail Cap(c_a), veh/h				511	0	449	368	2274	0	0	2014	625
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				43.1	0.0	42.8	35.6	0.0	0.0	0.0	31.2	33.5
Incr Delay (d2), s/veh				85.2	0.0	38.8	455.9	0.2	0.0	0.0	2.3	13.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				26.9	0.0	17.6	54.7	0.1	0.0	0.0	11.7	15.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				128.3	0.0	81.6	491.5	0.2	0.0	0.0	33.5	46.9
LnGrp LOS				F	A	F	F	A	A	A	C	D
Approach Vol, veh/h					1027			2507			1983	
Approach Delay, s/veh					108.2			145.3			37.1	
Approach LOS					F			F			D	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	81.0		29.0	52.0		39.0						
Change Period (Y+Rc), s	5.4		4.6	5.4		5.1						
Max Green Setting (Gmax), s	75.6		24.4	46.6		33.9						
Max Q Clear Time (g_c+I1), s	2.0		26.4	38.1		35.9						
Green Ext Time (p_c), s	24.5		0.0	6.4		0.0						

Intersection Summary		
HCM 6th Ctrl Delay	99.5	
HCM 6th LOS	F	

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

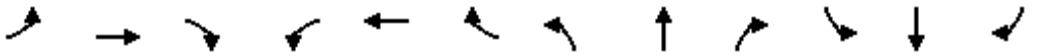
Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	613	7	1745	776	400	1512
Future Volume (vph)	613	7	1745	776	400	1512
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	4.0
Minimum Split (s)	20.0	20.0	30.4	30.4	14.5	25.4
Total Split (s)	40.0	40.0	46.0	46.0	34.0	80.0
Total Split (%)	33.3%	33.3%	38.3%	38.3%	28.3%	66.7%
Yellow Time (s)	4.1	4.1	4.4	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.4	5.4	4.6	5.4
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 90 (75%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated

Splits and Phases: 7: Cedar Av. & I-10 EB





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	613	7	473	0	0	0	0	1745	776	400	1512	0
Future Volume (veh/h)	613	7	473	0	0	0	0	1745	776	400	1512	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1876	1876	1900	1900	0
Adj Flow Rate, veh/h	575	115	490				0	1856	656	426	1609	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	526	92	391				0	1737	531	442	2244	0
Arrive On Green	0.29	0.29	0.29				0.00	0.34	0.34	0.49	1.00	0.00
Sat Flow, veh/h	1810	315	1343				0	5292	1567	1810	3705	0
Grp Volume(v), veh/h	575	0	605				0	1856	656	426	1609	0
Grp Sat Flow(s),veh/h/ln	1810	0	1658				0	1708	1567	1810	1805	0
Q Serve(g_s), s	34.9	0.0	34.9				0.0	40.7	40.7	27.3	0.0	0.0
Cycle Q Clear(g_c), s	34.9	0.0	34.9				0.0	40.7	40.7	27.3	0.0	0.0
Prop In Lane	1.00		0.81				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	526	0	482				0	1737	531	442	2244	0
V/C Ratio(X)	1.09	0.00	1.25				0.00	1.07	1.23	0.96	0.72	0.00
Avail Cap(c_a), veh/h	526	0	482				0	1737	531	443	2244	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.60	0.60	0.00
Uniform Delay (d), s/veh	42.5	0.0	42.6				0.0	39.7	39.7	30.2	0.0	0.0
Incr Delay (d2), s/veh	66.8	0.0	130.6				0.0	42.6	121.1	24.4	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.0	0.0	31.5				0.0	23.2	32.9	11.3	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	109.4	0.0	173.2				0.0	82.3	160.8	54.6	1.2	0.0
LnGrp LOS	F	A	F				A	F	F	D	A	A
Approach Vol, veh/h		1180						2512			2035	
Approach Delay, s/veh		142.1						102.8			12.4	
Approach LOS		F						F			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	33.9	46.1		40.0		80.0
Change Period (Y+Rc), s	4.6	5.4		5.1		5.4
Max Green Setting (Gmax), s	29.4	40.6		34.9		74.6
Max Q Clear Time (g_c+I1), s	29.3	42.7		36.9		2.0
Green Ext Time (p_c), s	0.0	0.0		0.0		20.0

Intersection Summary		
HCM 6th Ctrl Delay		78.8
HCM 6th LOS		E

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 6.2:

EAPC (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Volume Development - AM Peak Hour

1: Cedar Av. & Driveway 1

	PHF:	0.920		7:00						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAPC:	0	1,024	26	0	1,342	0	0	0	0	4	0	0	2,397

2: Cedar Av. & Driveway 2

	PHF:	0.920		7:00						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAPC:	0	1,047	14	0	1,345	0	0	0	0	0	0	3	2,410

3: Cedar Av. & Durst Dr.

	PHF:	0.907		7:30						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAPC:	0	1,052	88	48	1,298	0	0	0	0	27	0	9	2,521

4: Cedar Av. & Merrill Av.

	PHF:	0.889		7:30						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAPC:	94	825	79	186	959	89	134	202	59	105	272	107	3,111

5: Cedar Av. & Valley Blvd.

	PHF:	0.929		7:00						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAPC:	383	1,283	329	50	1,358	23	59	162	571	406	251	37	4,913

6: Cedar Av. & I-10 WB

	PHF:	0.974		7:00						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAPC:	557	1,559	0	0	1,623	712	0	0	0	732	2	435	5,620

7: Cedar Av. & I-10 EB

	PHF:	0.983		7:00						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAPC:	0	1,473	664	439	1,915	0	644	4	793	0	0	0	5,932

8: Driveway 3 & Durst Dr.

	PHF:	0.920		7:00						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAPC:	0	0	0	0	0	20	57	79	0	0	16	0	171

Volume Development - PM Peak Hour

1: Cedar Av. & Driveway 1

	PHF:	0.920		4:30						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAPC:	0	1,285	9	0	1,169	0	0	0	0	13	0	0	2,477

2: Cedar Av. & Driveway 2

	PHF:	0.920		4:00						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAPC:	0	1,284	5	0	1,182	0	0	0	0	0	0	10	2,482

3: Cedar Av. & Durst Dr.

	PHF:	0.950		4:00						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAPC:	0	1,242	25	17	1,166	0	0	0	0	115	0	47	2,611

4: Cedar Av. & Merrill Av.

	PHF:	0.960		4:30						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAPC:	109	961	83	155	1,007	90	135	354	112	86	231	133	3,456

5: Cedar Av. & Valley Blvd.

	PHF:	0.963		4:00						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAPC:	439	1,393	290	97	1,258	81	276	418	532	334	263	73	5,451

6: Cedar Av. & I-10 WB

	PHF:	0.937		4:15						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAPC:	696	1,676	0	0	1,393	731	0	0	0	547	2	445	5,490

7: Cedar Av. & I-10 EB

	PHF:	0.942		4:30						Count Date:	10/7/2021		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAPC:	0	1,746	776	425	1,514	0	627	7	473	0	0	0	5,568

8: Driveway 3 & Durst Dr.

	PHF:	0.920		4:00						Count Date:			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2023 EAPC:	0	0	0	0	0	73	20	22	0	0	89	0	204

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	0	1024	26	0	1342
Future Vol, veh/h	4	0	1024	26	0	1342
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	0	1113	28	0	1459

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1857	-	0	0	-	-
Stage 1	1127	-	-	-	-	-
Stage 2	730	-	-	-	-	-
Critical Hdwy	6.8	-	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	-	-	-	-	-
Pot Cap-1 Maneuver	67	0	-	-	0	-
Stage 1	275	0	-	-	0	-
Stage 2	443	0	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	67	-	-	-	-	-
Mov Cap-2 Maneuver	229	-	-	-	-	-
Stage 1	275	-	-	-	-	-
Stage 2	443	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	229	-
HCM Lane V/C Ratio	-	-	0.019	-
HCM Control Delay (s)	-	-	21	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	1047	14	0	1345
Future Vol, veh/h	0	3	1047	14	0	1345
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	1138	15	0	1462

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	577	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	465	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	465	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	465	-
HCM Lane V/C Ratio	-	-	0.007	-
HCM Control Delay (s)	-	-	12.8	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	9	1052	88	48	1298
Future Vol, veh/h	27	9	1052	88	48	1298
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	10	1156	97	53	1426

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2024	627	0	0	1253	0
Stage 1	1205	-	-	-	-	-
Stage 2	819	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	51	431	-	-	562	-
Stage 1	251	-	-	-	-	-
Stage 2	399	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	46	431	-	-	562	-
Mov Cap-2 Maneuver	198	-	-	-	-	-
Stage 1	251	-	-	-	-	-
Stage 2	361	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	229	562	-
HCM Lane V/C Ratio	-	-	0.173	0.094	-
HCM Control Delay (s)	-	-	24	12.1	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.6	0.3	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	134	202	59	105	272	94	825	186	959
Future Volume (vph)	134	202	59	105	272	94	825	186	959
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	29.8	29.8	29.8	30.8	30.8	14.5	27.8	14.5	27.8
Total Split (s)	33.0	33.0	33.0	33.0	33.0	14.6	35.0	22.0	42.4
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	16.2%	38.9%	24.4%	47.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	4.6	5.8	4.6	5.8
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 79.2
Natural Cycle: 80
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Cedar Av. & Merrill Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	202	59	105	272	107	94	825	79	186	959	89
Future Volume (veh/h)	134	202	59	105	272	107	94	825	79	186	959	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	151	227	39	118	306	68	106	927	47	209	1078	88
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	284	525	443	289	813	178	132	1106	56	250	1301	106
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.08	0.33	0.33	0.15	0.41	0.41
Sat Flow, veh/h	916	1800	1521	1010	2788	611	1619	3310	168	1619	3202	261
Grp Volume(v), veh/h	151	227	39	118	186	188	106	479	495	209	575	591
Grp Sat Flow(s),veh/h/ln	916	1800	1521	1010	1710	1689	1619	1710	1768	1619	1710	1753
Q Serve(g_s), s	11.6	7.5	1.4	7.9	6.4	6.5	4.7	19.1	19.1	9.2	22.1	22.2
Cycle Q Clear(g_c), s	18.1	7.5	1.4	15.4	6.4	6.5	4.7	19.1	19.1	9.2	22.1	22.2
Prop In Lane	1.00		1.00	1.00		0.36	1.00		0.09	1.00		0.15
Lane Grp Cap(c), veh/h	284	525	443	289	499	492	132	571	591	250	695	712
V/C Ratio(X)	0.53	0.43	0.09	0.41	0.37	0.38	0.80	0.84	0.84	0.84	0.83	0.83
Avail Cap(c_a), veh/h	355	666	562	368	632	624	220	679	702	383	851	872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	21.1	18.9	27.4	20.7	20.8	33.2	22.7	22.7	30.2	19.5	19.5
Incr Delay (d2), s/veh	1.6	0.6	0.1	0.9	0.5	0.5	10.6	7.9	7.7	9.5	5.7	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	2.9	0.4	1.8	2.3	2.4	2.1	7.9	8.2	3.9	8.5	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.5	21.7	19.0	28.3	21.2	21.3	43.7	30.6	30.3	39.7	25.3	25.2
LnGrp LOS	C	C	B	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h		417			492			1080			1375	
Approach Delay, s/veh		24.3			22.9			31.8			27.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.9	30.4		27.2	10.6	35.7		27.2				
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8				
Max Green Setting (Gmax), s	17.4	29.2		27.2	10.0	36.6		27.2				
Max Q Clear Time (g_c+I1), s	11.2	21.1		20.1	6.7	24.2		17.4				
Green Ext Time (p_c), s	0.3	3.5		1.2	0.1	5.6		1.8				

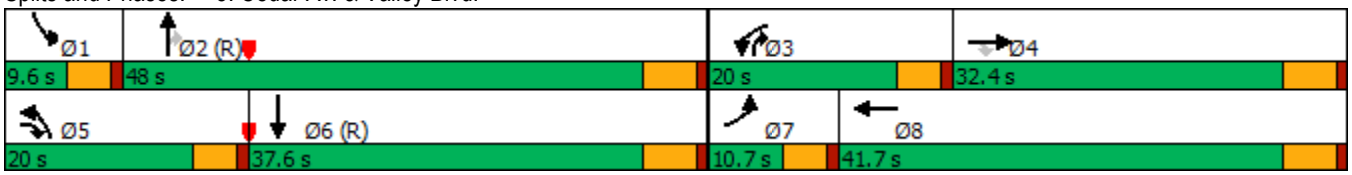
Intersection Summary			
HCM 6th Ctrl Delay		27.8	
HCM 6th LOS		C	

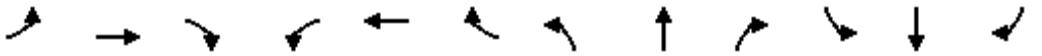
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	59	162	571	406	251	383	1283	329	50	1358
Future Volume (vph)	59	162	571	406	251	383	1283	329	50	1358
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	5	3	8	5	2	3	1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	32.4	9.6	9.6	32.4	9.6	32.4	9.6	9.6	32.4
Total Split (s)	10.7	32.4	20.0	20.0	41.7	20.0	48.0	20.0	9.6	37.6
Total Split (%)	9.7%	29.5%	18.2%	18.2%	37.9%	18.2%	43.6%	18.2%	8.7%	34.2%
Yellow Time (s)	3.6	4.4	3.6	3.6	4.4	3.6	4.4	3.6	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	4.6	5.4	4.6	5.4	4.6	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 49 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 5: Cedar Av. & Valley Blvd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	162	571	406	251	37	383	1283	329	50	1358	23
Future Volume (veh/h)	59	162	571	406	251	37	383	1283	329	50	1358	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	63	174	419	437	270	28	412	1380	267	54	1460	24
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	115	301	825	414	840	86	414	1622	928	109	1848	30
Arrive On Green	0.04	0.17	0.17	0.14	0.27	0.27	0.14	0.47	0.47	0.04	0.37	0.37
Sat Flow, veh/h	2956	1800	2685	2956	3129	322	2956	3420	1506	2956	4979	82
Grp Volume(v), veh/h	63	174	419	437	146	152	412	1380	267	54	961	523
Grp Sat Flow(s),veh/h/ln	1478	1800	1342	1478	1710	1741	1478	1710	1506	1478	1638	1785
Q Serve(g_s), s	2.3	9.8	14.1	15.4	7.5	7.7	15.3	39.1	9.1	2.0	28.7	28.7
Cycle Q Clear(g_c), s	2.3	9.8	14.1	15.4	7.5	7.7	15.3	39.1	9.1	2.0	28.7	28.7
Prop In Lane	1.00		1.00	1.00		0.18	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	115	301	825	414	459	467	414	1622	928	109	1216	662
V/C Ratio(X)	0.55	0.58	0.51	1.06	0.32	0.32	1.00	0.85	0.29	0.50	0.79	0.79
Avail Cap(c_a), veh/h	164	442	1035	414	564	575	414	1622	928	134	1216	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.64	0.64	0.64
Uniform Delay (d), s/veh	51.9	42.2	31.3	47.3	32.2	32.3	47.3	25.5	9.9	52.0	30.8	30.8
Incr Delay (d2), s/veh	4.0	1.8	0.5	59.7	0.4	0.4	43.0	5.8	0.8	2.2	3.4	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.4	4.5	9.0	3.1	3.2	8.0	16.1	2.9	0.8	11.4	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.0	44.0	31.8	107.0	32.6	32.7	90.2	31.3	10.7	54.2	34.2	36.9
LnGrp LOS	E	D	C	F	C	C	F	C	B	D	C	D
Approach Vol, veh/h		656			735			2059			1538	
Approach Delay, s/veh		37.3			76.9			40.4			35.9	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	57.6	20.0	23.8	20.0	46.2	8.9	34.9
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Max Green Setting (Gmax), s	5.0	42.6	15.4	27.0	15.4	32.2	6.1	36.3
Max Q Clear Time (g_c+I1), s	4.0	41.1	17.4	16.1	17.3	30.7	4.3	9.7
Green Ext Time (p_c), s	0.0	1.2	0.0	2.0	0.0	1.2	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	44.0
HCM 6th LOS	D

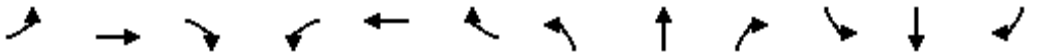
Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	435	557	1559	1623	712
Future Volume (vph)	2	435	557	1559	1623	712
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	14.6	27.4	25.4	25.4
Total Split (s)	41.0	41.0	30.0	69.0	39.0	39.0
Total Split (%)	37.3%	37.3%	27.3%	62.7%	35.5%	35.5%
Yellow Time (s)	4.1	4.1	3.6	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	4.6	5.4	5.4	5.4
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 64 (58%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 6: Cedar Av. & I-10 WB





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	732	2	435	557	1559	0	0	1623	712
Future Volume (veh/h)	0	0	0	732	2	435	557	1559	0	0	1623	712
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				755	2	320	574	1607	0	0	1673	455
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				589	2	519	418	2087	0	0	1584	492
Arrive On Green				0.33	0.33	0.33	0.08	0.19	0.00	0.00	0.31	0.31
Sat Flow, veh/h				1805	5	1590	1810	3705	0	0	5358	1610
Grp Volume(v), veh/h				757	0	320	574	1607	0	0	1673	455
Grp Sat Flow(s),veh/h/ln				1810	0	1590	1810	1805	0	0	1729	1610
Q Serve(g_s), s				35.9	0.0	18.7	25.4	46.4	0.0	0.0	33.6	30.1
Cycle Q Clear(g_c), s				35.9	0.0	18.7	25.4	46.4	0.0	0.0	33.6	30.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				591	0	519	418	2087	0	0	1584	492
V/C Ratio(X)				1.28	0.00	0.62	1.37	0.77	0.00	0.00	1.06	0.93
Avail Cap(c_a), veh/h				591	0	519	418	2087	0	0	1584	492
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.1	0.0	31.2	50.8	37.6	0.0	0.0	38.2	37.0
Incr Delay (d2), s/veh				139.4	0.0	2.2	169.6	0.3	0.0	0.0	39.0	25.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				38.2	0.0	7.3	32.0	22.3	0.0	0.0	19.1	14.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				176.4	0.0	33.4	220.4	37.8	0.0	0.0	77.2	62.6
LnGrp LOS				F	A	C	F	D	A	A	F	E
Approach Vol, veh/h					1077			2181			2128	
Approach Delay, s/veh					133.9			85.9			74.1	
Approach LOS					F			F			E	

Timer - Assigned Phs	2			5	6		8					
Phs Duration (G+Y+Rc), s	69.0			30.0	39.0		41.0					
Change Period (Y+Rc), s	5.4			4.6	5.4		5.1					
Max Green Setting (Gmax), s	63.6			25.4	33.6		35.9					
Max Q Clear Time (g_c+I1), s	48.4			27.4	35.6		37.9					
Green Ext Time (p_c), s	9.8			0.0	0.0		0.0					

Intersection Summary		
HCM 6th Ctrl Delay	90.8	
HCM 6th LOS	F	

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

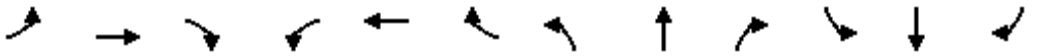
Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	644	4	1473	664	439	1915
Future Volume (vph)	644	4	1473	664	439	1915
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	4.0
Minimum Split (s)	20.0	20.0	30.4	30.4	14.5	25.4
Total Split (s)	42.0	42.0	31.0	31.0	37.0	68.0
Total Split (%)	38.2%	38.2%	28.2%	28.2%	33.6%	61.8%
Yellow Time (s)	4.1	4.1	4.4	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.4	5.4	4.6	5.4
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 35 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 7: Cedar Av. & I-10 EB





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	644	4	793	0	0	0	0	1473	664	439	1915	0
Future Volume (veh/h)	644	4	793	0	0	0	0	1473	664	439	1915	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1876	1876	1900	1900	0
Adj Flow Rate, veh/h	657	4	776				0	1503	490	448	1954	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	607	3	538				0	1325	410	486	2054	0
Arrive On Green	0.34	0.34	0.34				0.00	0.26	0.26	0.09	0.19	0.00
Sat Flow, veh/h	1810	8	1603				0	5292	1587	1810	3705	0
Grp Volume(v), veh/h	657	0	780				0	1503	490	448	1954	0
Grp Sat Flow(s),veh/h/ln	1810	0	1611				0	1708	1587	1810	1805	0
Q Serve(g_s), s	36.9	0.0	36.9				0.0	28.5	28.5	27.0	58.9	0.0
Cycle Q Clear(g_c), s	36.9	0.0	36.9				0.0	28.5	28.5	27.0	58.9	0.0
Prop In Lane	1.00		0.99				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	607	0	541				0	1325	410	486	2054	0
V/C Ratio(X)	1.08	0.00	1.44				0.00	1.13	1.19	0.92	0.95	0.00
Avail Cap(c_a), veh/h	607	0	541				0	1325	410	533	2054	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.09	0.09	0.00
Uniform Delay (d), s/veh	36.6	0.0	36.6				0.0	40.8	40.8	49.0	43.2	0.0
Incr Delay (d2), s/veh	60.8	0.0	209.6				0.0	70.2	108.9	2.7	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	26.0	0.0	45.5				0.0	20.1	23.1	13.4	28.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.4	0.0	246.2				0.0	111.0	149.6	51.7	44.6	0.0
LnGrp LOS	F	A	F				A	F	F	D	D	A
Approach Vol, veh/h		1437						1993			2402	
Approach Delay, s/veh		178.1						120.5			45.9	
Approach LOS		F						F			D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	34.1	33.9		42.0		68.0
Change Period (Y+Rc), s	4.6	5.4		5.1		5.4
Max Green Setting (Gmax), s	32.4	25.6		36.9		62.6
Max Q Clear Time (g_c+I1), s	29.0	30.5		38.9		60.9
Green Ext Time (p_c), s	0.5	0.0		0.0		1.6

Intersection Summary		
HCM 6th Ctrl Delay		104.0
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	57	79	16	0	0	20
Future Vol, veh/h	57	79	16	0	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	62	86	17	0	0	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	17	0	-	0	227	17
Stage 1	-	-	-	-	17	-
Stage 2	-	-	-	-	210	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1613	-	-	-	766	1068
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	830	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1613	-	-	-	735	1068
Mov Cap-2 Maneuver	-	-	-	-	735	-
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	830	-

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1613	-	-	-	1068
HCM Lane V/C Ratio	0.038	-	-	-	0.02
HCM Control Delay (s)	7.3	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	0	1285	9	0	1169
Future Vol, veh/h	13	0	1285	9	0	1169
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	0	1397	10	0	1271

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2038	-	0	0	-	-
Stage 1	1402	-	-	-	-	-
Stage 2	636	-	-	-	-	-
Critical Hdwy	6.8	-	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	-	-	-	-	-
Pot Cap-1 Maneuver	50	0	-	-	0	-
Stage 1	197	0	-	-	0	-
Stage 2	495	0	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	50	-	-	-	-	-
Mov Cap-2 Maneuver	176	-	-	-	-	-
Stage 1	197	-	-	-	-	-
Stage 2	495	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.2	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	176	-
HCM Lane V/C Ratio	-	-	0.08	-
HCM Control Delay (s)	-	-	27.2	-
HCM Lane LOS	-	-	D	-
HCM 95th %tile Q(veh)	-	-	0.3	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	1284	5	0	1182
Future Vol, veh/h	0	10	1284	5	0	1182
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	11	1396	5	0	1285

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	701	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	386	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	386	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	386	-
HCM Lane V/C Ratio	-	-	0.028	-
HCM Control Delay (s)	-	-	14.6	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	115	47	1242	25	17	1166
Future Vol, veh/h	115	47	1242	25	17	1166
Conflicting Peds, #/hr	0	0	0	8	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	121	49	1307	26	18	1227

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1978	675	0	0	1341	0
Stage 1	1328	-	-	-	-	-
Stage 2	650	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 55	401	-	-	521	-
Stage 1	216	-	-	-	-	-
Stage 2	487	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 53	398	-	-	517	-
Mov Cap-2 Maneuver	188	-	-	-	-	-
Stage 1	214	-	-	-	-	-
Stage 2	470	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	60.3	0	0.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	222	517	-
HCM Lane V/C Ratio	-	-	0.768	0.035	-
HCM Control Delay (s)	-	-	60.3	12.2	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	5.4	0.1	-

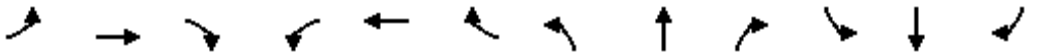
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	135	354	112	86	231	109	961	155	1007
Future Volume (vph)	135	354	112	86	231	109	961	155	1007
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	29.8	29.8	29.8	30.8	30.8	14.5	27.8	14.5	27.8
Total Split (s)	33.0	33.0	33.0	33.0	33.0	14.6	37.0	20.0	42.4
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	16.2%	41.1%	22.2%	47.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	4.6	5.8	4.6	5.8
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 80.3
Natural Cycle: 80
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Cedar Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	354	112	86	231	133	109	961	83	155	1007	90
Future Volume (veh/h)	135	354	112	86	231	133	109	961	83	155	1007	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	141	369	71	90	241	97	114	1001	83	161	1049	87
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	313	563	471	209	751	294	141	1147	95	196	1257	104
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.09	0.36	0.36	0.12	0.39	0.39
Sat Flow, veh/h	947	1800	1506	863	2402	939	1619	3190	264	1619	3197	265
Grp Volume(v), veh/h	141	369	71	90	170	168	114	536	548	161	561	575
Grp Sat Flow(s),veh/h/ln	947	1800	1506	863	1710	1631	1619	1710	1745	1619	1710	1752
Q Serve(g_s), s	10.5	13.9	2.7	7.9	5.9	6.2	5.4	23.0	23.0	7.6	23.2	23.3
Cycle Q Clear(g_c), s	16.7	13.9	2.7	21.8	5.9	6.2	5.4	23.0	23.0	7.6	23.2	23.3
Prop In Lane	1.00		1.00	1.00		0.58	1.00		0.15	1.00		0.15
Lane Grp Cap(c), veh/h	313	563	471	209	535	510	141	615	627	196	673	689
V/C Ratio(X)	0.45	0.66	0.15	0.43	0.32	0.33	0.81	0.87	0.87	0.82	0.83	0.83
Avail Cap(c_a), veh/h	345	624	522	238	593	565	206	680	694	318	798	817
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	23.3	19.4	32.7	20.6	20.7	35.2	23.5	23.5	33.7	21.5	21.5
Incr Delay (d2), s/veh	1.0	2.2	0.1	1.4	0.3	0.4	13.6	11.2	11.1	8.6	6.6	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	5.6	0.9	1.6	2.2	2.2	2.5	10.0	10.2	3.3	9.3	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.1	25.5	19.6	34.1	20.9	21.0	48.8	34.7	34.5	42.3	28.1	28.0
LnGrp LOS	C	C	B	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h		581			428			1198			1297	
Approach Delay, s/veh		25.4			23.7			35.9			29.8	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.1	34.0		30.4	11.5	36.7		30.4				
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8				
Max Green Setting (Gmax), s	15.4	31.2		27.2	10.0	36.6		27.2				
Max Q Clear Time (g_c+I1), s	9.6	25.0		18.7	7.4	25.3		23.8				
Green Ext Time (p_c), s	0.2	3.2		2.0	0.1	5.1		0.7				

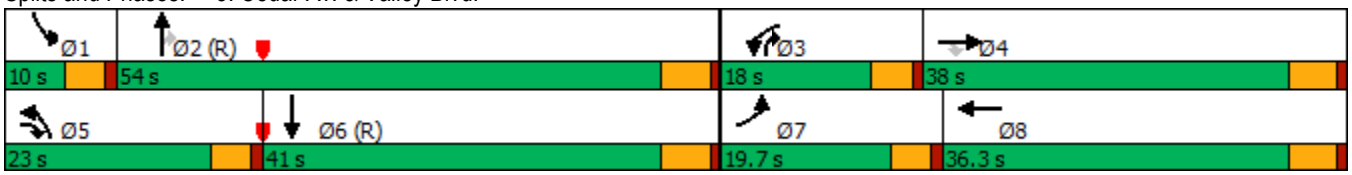
Intersection Summary			
HCM 6th Ctrl Delay		30.4	
HCM 6th LOS		C	

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	276	418	532	334	263	439	1393	290	97	1258
Future Volume (vph)	276	418	532	334	263	439	1393	290	97	1258
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	5	3	8	5	2	3	1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	33.4	9.6	9.6	33.4	9.6	32.4	9.6	9.6	32.4
Total Split (s)	19.7	38.0	23.0	18.0	36.3	23.0	54.0	18.0	10.0	41.0
Total Split (%)	16.4%	31.7%	19.2%	15.0%	30.3%	19.2%	45.0%	15.0%	8.3%	34.2%
Yellow Time (s)	3.6	4.4	3.6	3.6	4.4	3.6	4.4	3.6	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	4.6	5.4	4.6	5.4	4.6	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	C-Max	None	None	C-Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 98 (82%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated

Splits and Phases: 5: Cedar Av. & Valley Blvd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	276	418	532	334	263	73	439	1393	290	97	1258	81
Future Volume (veh/h)	276	418	532	334	263	73	439	1393	290	97	1258	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	288	435	403	348	274	64	457	1451	223	101	1310	78
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	336	469	1109	330	714	164	453	1422	794	133	1458	87
Arrive On Green	0.11	0.26	0.26	0.11	0.26	0.26	0.15	0.42	0.42	0.05	0.31	0.31
Sat Flow, veh/h	2956	1800	2675	2956	2760	634	2956	3420	1499	2956	4742	282
Grp Volume(v), veh/h	288	435	403	348	168	170	457	1451	223	101	905	483
Grp Sat Flow(s),veh/h/ln	1478	1800	1338	1478	1710	1683	1478	1710	1499	1478	1638	1749
Q Serve(g_s), s	11.5	28.3	12.5	13.4	9.7	10.0	18.4	49.9	9.9	4.1	31.7	31.7
Cycle Q Clear(g_c), s	11.5	28.3	12.5	13.4	9.7	10.0	18.4	49.9	9.9	4.1	31.7	31.7
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	336	469	1109	330	442	436	453	1422	794	133	1007	538
V/C Ratio(X)	0.86	0.93	0.36	1.05	0.38	0.39	1.01	1.02	0.28	0.76	0.90	0.90
Avail Cap(c_a), veh/h	372	489	1139	330	442	436	453	1422	794	133	1007	538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.65	0.65	0.65
Uniform Delay (d), s/veh	52.2	43.2	24.2	53.3	36.6	36.7	50.8	35.0	15.7	56.7	39.8	39.8
Incr Delay (d2), s/veh	16.5	23.4	0.2	64.5	0.5	0.6	44.3	29.1	0.9	15.1	8.6	14.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	15.3	3.9	7.8	4.0	4.1	9.5	25.4	3.4	1.8	13.5	15.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.7	66.6	24.4	117.8	37.1	37.2	95.1	64.1	16.6	71.8	48.4	54.3
LnGrp LOS	E	E	C	F	D	D	F	F	B	E	D	D
Approach Vol, veh/h		1126			686			2131			1489	
Approach Delay, s/veh		52.1			78.1			65.8			51.9	
Approach LOS		D			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	55.3	18.0	36.7	23.0	42.3	18.2	36.5
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Max Green Setting (Gmax), s	5.4	48.6	13.4	32.6	18.4	35.6	15.1	30.9
Max Q Clear Time (g_c+I1), s	6.1	51.9	15.4	30.3	20.4	33.7	13.5	12.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.0	0.0	1.4	0.2	1.7

Intersection Summary	
HCM 6th Ctrl Delay	60.7
HCM 6th LOS	E

Notes

User approved changes to right turn type.

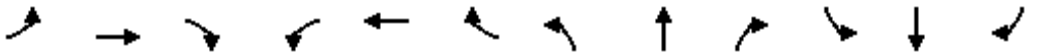
Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	445	696	1676	1393	731
Future Volume (vph)	2	445	696	1676	1393	731
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	14.6	27.4	25.4	25.4
Total Split (s)	39.0	39.0	29.0	81.0	52.0	52.0
Total Split (%)	32.5%	32.5%	24.2%	67.5%	43.3%	43.3%
Yellow Time (s)	4.1	4.1	3.6	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	4.6	5.4	5.4	5.4
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 107 (89%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 6: Cedar Av. & I-10 WB





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	547	2	445	696	1676	0	0	1393	731
Future Volume (veh/h)	0	0	0	547	2	445	696	1676	0	0	1393	731
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				582	2	452	740	1783	0	0	1482	573
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				510	2	449	368	2274	0	0	2014	625
Arrive On Green				0.28	0.28	0.28	0.41	1.00	0.00	0.00	0.39	0.39
Sat Flow, veh/h				1804	6	1590	1810	3705	0	0	5358	1609
Grp Volume(v), veh/h				584	0	452	740	1783	0	0	1482	573
Grp Sat Flow(s),veh/h/ln				1810	0	1590	1810	1805	0	0	1729	1609
Q Serve(g_s), s				33.9	0.0	33.9	24.4	0.0	0.0	0.0	29.4	40.6
Cycle Q Clear(g_c), s				33.9	0.0	33.9	24.4	0.0	0.0	0.0	29.4	40.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				511	0	449	368	2274	0	0	2014	625
V/C Ratio(X)				1.14	0.00	1.01	2.01	0.78	0.00	0.00	0.74	0.92
Avail Cap(c_a), veh/h				511	0	449	368	2274	0	0	2014	625
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				43.1	0.0	43.0	35.6	0.0	0.0	0.0	31.4	34.9
Incr Delay (d2), s/veh				85.2	0.0	44.1	455.9	0.3	0.0	0.0	2.4	20.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				26.9	0.0	18.5	54.7	0.1	0.0	0.0	12.1	18.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				128.3	0.0	87.2	491.5	0.3	0.0	0.0	33.9	55.4
LnGrp LOS				F	A	F	F	A	A	A	C	E
Approach Vol, veh/h					1036			2523			2055	
Approach Delay, s/veh					110.3			144.3			39.9	
Approach LOS					F			F			D	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	81.0		29.0	52.0		39.0						
Change Period (Y+Rc), s	5.4		4.6	5.4		5.1						
Max Green Setting (Gmax), s	75.6		24.4	46.6		33.9						
Max Q Clear Time (g_c+I1), s	2.0		26.4	42.6		35.9						
Green Ext Time (p_c), s	24.9		0.0	3.3		0.0						

Intersection Summary		
HCM 6th Ctrl Delay	99.8	
HCM 6th LOS	F	

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	627	7	1746	776	425	1514
Future Volume (vph)	627	7	1746	776	425	1514
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	4.0
Minimum Split (s)	20.0	20.0	30.4	30.4	14.5	25.4
Total Split (s)	40.0	40.0	46.0	46.0	34.0	80.0
Total Split (%)	33.3%	33.3%	38.3%	38.3%	28.3%	66.7%
Yellow Time (s)	4.1	4.1	4.4	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.4	5.4	4.6	5.4
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 90 (75%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 7: Cedar Av. & I-10 EB



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	627	7	473	0	0	0	0	1746	776	425	1514	0
Future Volume (veh/h)	627	7	473	0	0	0	0	1746	776	425	1514	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1876	1876	1900	1900	0
Adj Flow Rate, veh/h	582	126	490				0	1857	656	452	1611	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	526	99	385				0	1733	530	443	2244	0
Arrive On Green	0.29	0.29	0.29				0.00	0.34	0.34	0.49	1.00	0.00
Sat Flow, veh/h	1810	340	1322				0	5292	1567	1810	3705	0
Grp Volume(v), veh/h	582	0	616				0	1857	656	452	1611	0
Grp Sat Flow(s),veh/h/ln	1810	0	1662				0	1708	1567	1810	1805	0
Q Serve(g_s), s	34.9	0.0	34.9				0.0	40.6	40.6	29.4	0.0	0.0
Cycle Q Clear(g_c), s	34.9	0.0	34.9				0.0	40.6	40.6	29.4	0.0	0.0
Prop In Lane	1.00		0.80				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	526	0	483				0	1733	530	443	2244	0
V/C Ratio(X)	1.11	0.00	1.27				0.00	1.07	1.24	1.02	0.72	0.00
Avail Cap(c_a), veh/h	526	0	483				0	1733	530	443	2244	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.58	0.58	0.00
Uniform Delay (d), s/veh	42.5	0.0	42.6				0.0	39.7	39.7	30.6	0.0	0.0
Incr Delay (d2), s/veh	71.5	0.0	138.8				0.0	43.6	122.2	37.6	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.7	0.0	32.6				0.0	23.3	33.0	13.6	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.0	0.0	181.4				0.0	83.3	161.9	68.2	1.2	0.0
LnGrp LOS	F	A	F				A	F	F	F	A	A
Approach Vol, veh/h		1198						2513			2063	
Approach Delay, s/veh		148.7						103.8			15.8	
Approach LOS		F						F			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	34.0	46.0		40.0		80.0
Change Period (Y+Rc), s	4.6	5.4		5.1		5.4
Max Green Setting (Gmax), s	29.4	40.6		34.9		74.6
Max Q Clear Time (g_c+I1), s	31.4	42.6		36.9		2.0
Green Ext Time (p_c), s	0.0	0.0		0.0		20.0

Intersection Summary		
HCM 6th Ctrl Delay		81.7
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	22	89	0	0	73
Future Vol, veh/h	20	22	89	0	0	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	22	24	97	0	0	79

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	97	0	-	0	165	97
Stage 1	-	-	-	-	97	-
Stage 2	-	-	-	-	68	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1509	-	-	-	830	965
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	960	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1509	-	-	-	818	965
Mov Cap-2 Maneuver	-	-	-	-	818	-
Stage 1	-	-	-	-	918	-
Stage 2	-	-	-	-	960	-

Approach	EB	WB	SB
HCM Control Delay, s	3.5	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1509	-	-	-	965
HCM Lane V/C Ratio	0.014	-	-	-	0.082
HCM Control Delay (s)	7.4	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3

APPENDIX 6.3:

EAPC (2023) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	EAPC
				CALC MT	DATE 11/17/21
Jurisdiction: City of Rialto				CHK MT	DATE 11/17/21
Major Street: Durst Drive				Critical Approach Speed (Major)	45 mph
Minor Street: Driveway 3				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **1,417** vpd Minor Street Future ADT = **248** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ..... √

or

In built up area of isolated community of < 10,000 population .....

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied (XX)	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 **1,417** / 1 **248**	8,000	5,600	2,400	1,680
2 + / 1	9,600	6,720	2,400	1,680
2 + / 2 +	9,600	6,720	3,200	2,240
1 / 2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied (XX)	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 **1,417** / 1 **248**	12,000	8,400	1,200	850
2 + / 1	14,400	10,080	1,200	850
2 + / 2 +	14,400	10,080	1,600	1,120
1 / 2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied (XX)	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ..... A 15% B 17%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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APPENDIX 6.4:

EAPC (2023) CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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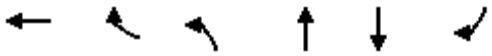


Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	802	403	574	1607	1673	734
v/c Ratio	1.43	0.75	1.38	0.77	1.06	0.79
Control Delay	236.3	37.0	203.3	7.4	65.9	9.2
Queue Delay	5.5	0.0	0.0	48.0	19.0	0.9
Total Delay	241.8	37.0	203.3	55.4	85.0	10.0
Queue Length 50th (ft)	~814	222	~513	110	~478	43
Queue Length 95th (ft)	#1067	351	m#419	m60	m#542	m25
Internal Link Dist (ft)	921			330	170	
Turn Bay Length (ft)		530				
Base Capacity (vph)	559	540	416	2087	1584	924
Starvation Cap Reductn	0	0	0	687	0	49
Spillback Cap Reductn	247	1	0	85	420	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	2.57	0.75	1.38	1.15	1.44	0.84

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



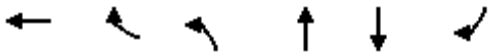
Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	591	879	1503	678	448	1954
v/c Ratio	1.03	1.67	1.16	0.77	0.91	0.95
Control Delay	81.7	337.5	117.9	11.1	32.6	39.3
Queue Delay	0.0	0.0	0.7	0.0	21.1	46.1
Total Delay	81.7	337.5	118.7	11.1	53.7	85.4
Queue Length 50th (ft)	~470	~958	~488	21	300	785
Queue Length 95th (ft)	#697	#1216	#584	163	m251	m683
Internal Link Dist (ft)		1189	666			330
Turn Bay Length (ft)	400			575		
Base Capacity (vph)	575	526	1298	877	531	2054
Starvation Cap Reductn	0	0	0	0	88	1066
Spillback Cap Reductn	0	0	213	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.03	1.67	1.39	0.77	1.01	1.98

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	631	426	740	1783	1482	778
v/c Ratio	1.27	0.88	2.02	0.79	0.75	0.78
Control Delay	174.9	55.6	490.4	9.2	23.8	6.0
Queue Delay	8.4	0.4	0.0	2.7	1.1	1.5
Total Delay	183.3	56.0	490.4	11.9	24.9	7.5
Queue Length 50th (ft)	~662	291	~883	143	266	28
Queue Length 95th (ft)	#904	#494	m#773	m130	m285	m24
Internal Link Dist (ft)	921			330	170	
Turn Bay Length (ft)		530				
Base Capacity (vph)	495	483	367	2274	2014	1005
Starvation Cap Reductn	0	0	0	366	290	95
Spillback Cap Reductn	263	3	0	218	48	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	2.72	0.89	2.02	0.93	0.86	0.85

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	600	577	1857	826	452	1611
v/c Ratio	1.20	1.21	1.07	0.88	1.02	0.72
Control Delay	147.8	149.3	81.1	21.2	78.4	27.2
Queue Delay	3.9	4.0	13.3	0.0	27.7	48.6
Total Delay	151.7	153.2	94.4	21.2	106.1	75.8
Queue Length 50th (ft)	~594	~556	~583	171	~386	487
Queue Length 95th (ft)	#830	#793	#680	#477	m#492	m505
Internal Link Dist (ft)		1189	666			330
Turn Bay Length (ft)	400			575		
Base Capacity (vph)	498	476	1737	940	442	2244
Starvation Cap Reductn	0	0	0	0	52	966
Spillback Cap Reductn	166	156	222	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.81	1.80	1.23	0.88	1.16	1.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX 6.5:

EAPC (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	27	1052	48	1298
Future Volume (vph)	27	1052	48	1298
Turn Type	Prot	NA	Prot	NA
Protected Phases	8	2	1	6
Permitted Phases				
Detector Phase	8	2	1	6
Switch Phase				
Minimum Initial (s)	10.0	10.0	10.0	10.0
Minimum Split (s)	21.5	21.5	14.5	21.5
Total Split (s)	21.5	33.9	14.6	48.5
Total Split (%)	30.7%	48.4%	20.9%	69.3%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	None	Min	None	Min

Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 48.8
Natural Cycle: 70
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Cedar Av. & Durst Dr





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	27	9	1052	88	48	1298
Future Volume (veh/h)	27	9	1052	88	48	1298
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.99		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1700	1800	1800	1800	1700	1800
Adj Flow Rate, veh/h	30	10	1156	97	53	1426
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	103	34	1567	131	176	2404
Arrive On Green	0.09	0.09	0.49	0.49	0.11	0.70
Sat Flow, veh/h	1147	382	3284	268	1619	3510
Grp Volume(v), veh/h	41	0	618	635	53	1426
Grp Sat Flow(s),veh/h/ln	1568	0	1710	1752	1619	1710
Q Serve(g_s), s	1.1	0.0	12.5	12.6	1.3	9.2
Cycle Q Clear(g_c), s	1.1	0.0	12.5	12.6	1.3	9.2
Prop In Lane	0.73	0.24		0.15	1.00	
Lane Grp Cap(c), veh/h	141	0	839	860	176	2404
V/C Ratio(X)	0.29	0.00	0.74	0.74	0.30	0.59
Avail Cap(c_a), veh/h	613	0	1157	1185	376	3463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.5	0.0	8.8	8.8	17.8	3.3
Incr Delay (d2), s/veh	1.1	0.0	1.6	1.6	0.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	2.9	3.0	0.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.6	0.0	10.4	10.4	18.8	3.5
LnGrp LOS	B	A	B	B	B	A
Approach Vol, veh/h	41		1253			1479
Approach Delay, s/veh	19.6		10.4			4.1
Approach LOS	B		B			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	9.2	25.8			35.0	8.4
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	10.1	29.4			44.0	17.0
Max Q Clear Time (g_c+I1), s	3.3	14.6			11.2	3.1
Green Ext Time (p_c), s	0.0	6.7			12.6	0.1

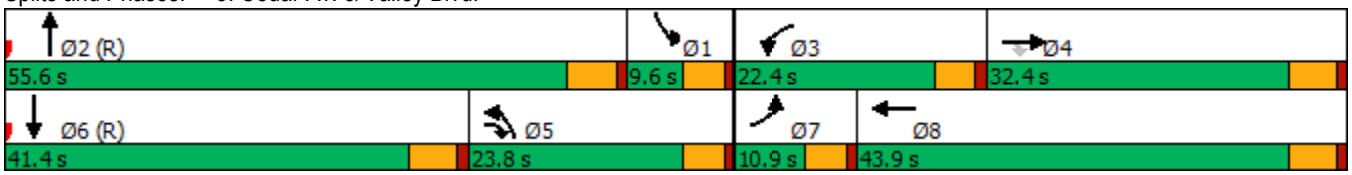
Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

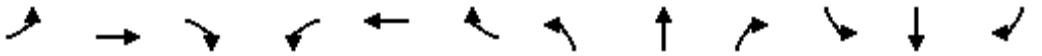
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	59	162	571	406	251	383	1283	50	1358
Future Volume (vph)	59	162	571	406	251	383	1283	50	1358
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.4	9.6	9.6	32.4	9.6	32.4	9.6	32.4
Total Split (s)	10.9	32.4	23.8	22.4	43.9	23.8	55.6	9.6	41.4
Total Split (%)	9.1%	27.0%	19.8%	18.7%	36.6%	19.8%	46.3%	8.0%	34.5%
Yellow Time (s)	3.6	4.4	3.6	3.6	4.4	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	4.6	5.4	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated

Splits and Phases: 5: Cedar Av. & Valley Blvd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	162	571	406	251	37	383	1283	329	50	1358	23
Future Volume (veh/h)	59	162	571	406	251	37	383	1283	329	50	1358	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	63	174	419	437	270	28	412	1380	267	54	1460	24
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	108	378	587	439	696	72	811	1725	333	462	1494	25
Arrive On Green	0.04	0.11	0.11	0.15	0.22	0.22	0.27	0.42	0.42	0.16	0.30	0.30
Sat Flow, veh/h	2956	3420	1525	2956	3129	322	2956	4124	797	2956	4979	82
Grp Volume(v), veh/h	63	174	419	437	146	152	412	1096	551	54	961	523
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1710	1741	1478	1638	1645	1478	1638	1785
Q Serve(g_s), s	2.5	5.7	8.5	17.7	8.7	8.9	14.1	35.1	35.2	1.9	34.8	34.8
Cycle Q Clear(g_c), s	2.5	5.7	8.5	17.7	8.7	8.9	14.1	35.1	35.2	1.9	34.8	34.8
Prop In Lane	1.00		1.00	1.00		0.18	1.00		0.48	1.00		0.05
Lane Grp Cap(c), veh/h	108	378	587	439	380	387	811	1370	688	462	983	536
V/C Ratio(X)	0.58	0.46	0.71	1.00	0.39	0.39	0.51	0.80	0.80	0.12	0.98	0.98
Avail Cap(c_a), veh/h	155	770	762	439	549	559	811	1370	688	462	983	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.64	0.64	0.64
Uniform Delay (d), s/veh	56.9	50.0	12.7	51.1	39.7	39.7	36.7	30.5	30.5	43.5	41.6	41.6
Incr Delay (d2), s/veh	4.9	0.9	2.2	42.0	0.6	0.6	0.5	5.0	9.5	0.1	18.2	26.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.5	5.1	9.0	3.7	3.8	5.0	14.2	15.1	0.7	16.0	18.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.8	50.9	14.9	93.1	40.3	40.4	37.2	35.5	40.0	43.6	59.8	67.7
LnGrp LOS	E	D	B	F	D	D	D	D	D	D	E	E
Approach Vol, veh/h		656			735			2059			1538	
Approach Delay, s/veh		29.0			71.7			37.0			61.9	
Approach LOS		C			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.3	55.6	22.4	18.7	37.5	41.4	9.0	32.1
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Max Green Setting (Gmax), s	5.0	50.2	17.8	27.0	19.2	36.0	6.3	38.5
Max Q Clear Time (g_c+I1), s	3.9	37.2	19.7	10.5	16.1	36.8	4.5	10.9
Green Ext Time (p_c), s	0.0	8.4	0.0	2.3	0.5	0.0	0.0	1.6

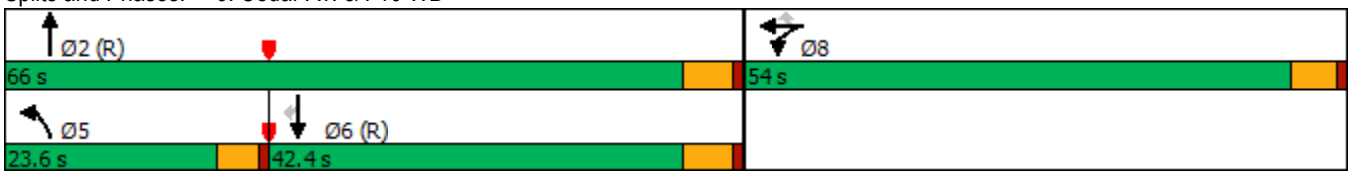
Intersection Summary	
HCM 6th Ctrl Delay	48.8
HCM 6th LOS	D

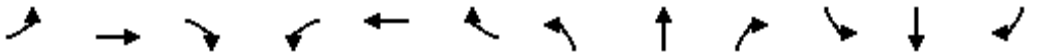
Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	435	557	1559	1623	712
Future Volume (vph)	2	435	557	1559	1623	712
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	14.6	27.4	25.4	25.4
Total Split (s)	54.0	54.0	23.6	66.0	42.4	42.4
Total Split (%)	45.0%	45.0%	19.7%	55.0%	35.3%	35.3%
Yellow Time (s)	4.1	4.1	3.6	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	4.6	5.4	5.4	5.4
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 116 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 6: Cedar Av. & I-10 WB





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	732	2	435	557	1559	0	0	1623	712
Future Volume (veh/h)	0	0	0	732	2	435	557	1559	0	0	1623	712
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				755	2	320	574	1607	0	0	1673	455
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				736	2	648	556	1823	0	0	1599	496
Arrive On Green				0.41	0.41	0.41	0.32	1.00	0.00	0.00	0.31	0.31
Sat Flow, veh/h				1805	5	1590	3510	3705	0	0	5358	1610
Grp Volume(v), veh/h				757	0	320	574	1607	0	0	1673	455
Grp Sat Flow(s),veh/h/ln				1810	0	1590	1755	1805	0	0	1729	1610
Q Serve(g_s), s				48.9	0.0	17.9	19.0	0.0	0.0	0.0	37.0	32.7
Cycle Q Clear(g_c), s				48.9	0.0	17.9	19.0	0.0	0.0	0.0	37.0	32.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				737	0	648	556	1823	0	0	1599	496
V/C Ratio(X)				1.03	0.00	0.49	1.03	0.88	0.00	0.00	1.05	0.92
Avail Cap(c_a), veh/h				737	0	648	556	1823	0	0	1599	496
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.52	0.52	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				35.6	0.0	26.4	41.0	0.0	0.0	0.0	41.5	40.0
Incr Delay (d2), s/veh				40.1	0.0	0.6	36.3	3.6	0.0	0.0	35.6	24.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				28.9	0.0	6.8	9.3	0.9	0.0	0.0	20.3	15.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				75.6	0.0	27.0	77.3	3.6	0.0	0.0	77.1	64.2
LnGrp LOS				F	A	C	F	A	A	A	F	E
Approach Vol, veh/h					1077			2181			2128	
Approach Delay, s/veh					61.2			23.0			74.4	
Approach LOS					E			C			E	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		66.0			23.6	42.4		54.0				
Change Period (Y+Rc), s		5.4			4.6	5.4		5.1				
Max Green Setting (Gmax), s		60.6			19.0	37.0		48.9				
Max Q Clear Time (g_c+I1), s		2.0			21.0	39.0		50.9				
Green Ext Time (p_c), s		19.1			0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	50.9	
HCM 6th LOS	D	

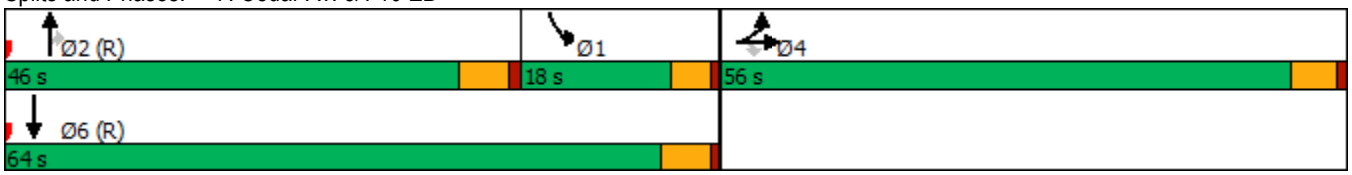
Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

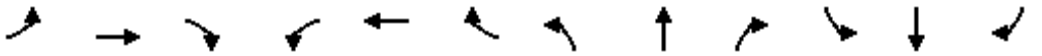
Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	644	4	793	1473	664	439	1915
Future Volume (vph)	644	4	793	1473	664	439	1915
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	4	4		2		1	6
Permitted Phases			4		2		
Detector Phase	4	4	4	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0
Minimum Split (s)	20.0	20.0	20.0	30.4	30.4	14.5	25.4
Total Split (s)	56.0	56.0	56.0	46.0	46.0	18.0	64.0
Total Split (%)	46.7%	46.7%	46.7%	38.3%	38.3%	15.0%	53.3%
Yellow Time (s)	4.1	4.1	4.1	4.4	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.4	5.4	4.6	5.4
Lead/Lag				Lead	Lead	Lag	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 70 (58%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 7: Cedar Av. & I-10 EB





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	644	4	793	0	0	0	0	1473	664	439	1915	0
Future Volume (veh/h)	644	4	793	0	0	0	0	1473	664	439	1915	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1876	1876	1900	1900	0
Adj Flow Rate, veh/h	919	0	499				0	1503	490	448	1954	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	1267	0	564				0	1714	531	642	2030	0
Arrive On Green	0.35	0.00	0.35				0.00	0.33	0.33	0.24	0.75	0.00
Sat Flow, veh/h	3619	0	1610				0	5292	1587	3510	3705	0
Grp Volume(v), veh/h	919	0	499				0	1503	490	448	1954	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1708	1587	1755	1805	0
Q Serve(g_s), s	26.5	0.0	35.0				0.0	33.2	35.7	14.0	58.4	0.0
Cycle Q Clear(g_c), s	26.5	0.0	35.0				0.0	33.2	35.7	14.0	58.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1267	0	564				0	1714	531	642	2030	0
V/C Ratio(X)	0.73	0.00	0.89				0.00	0.88	0.92	0.70	0.96	0.00
Avail Cap(c_a), veh/h	1535	0	683				0	1733	537	642	2030	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.09	0.09	0.00
Uniform Delay (d), s/veh	34.0	0.0	36.7				0.0	37.6	38.4	42.4	14.0	0.0
Incr Delay (d2), s/veh	1.4	0.0	11.6				0.0	6.7	23.9	0.3	1.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	0.0	15.2				0.0	14.4	16.9	5.6	14.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	0.0	48.3				0.0	44.3	62.4	42.7	15.8	0.0
LnGrp LOS	D	A	D				A	D	E	D	B	A
Approach Vol, veh/h		1418						1993			2402	
Approach Delay, s/veh		39.9						48.7			20.8	
Approach LOS		D						D			C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	27.3	45.6		47.1		72.9
Change Period (Y+Rc), s	5.4	* 5.4		5.1		5.4
Max Green Setting (Gmax), s	13.4	* 41		50.9		58.6
Max Q Clear Time (g_c+I1), s	16.0	37.7		37.0		60.4
Green Ext Time (p_c), s	0.0	2.5		5.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay		35.1
HCM 6th LOS		D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	115	1242	17	1166
Future Volume (vph)	115	1242	17	1166
Turn Type	Prot	NA	Prot	NA
Protected Phases	8	2	1	6
Permitted Phases				
Detector Phase	8	2	1	6
Switch Phase				
Minimum Initial (s)	10.0	10.0	10.0	10.0
Minimum Split (s)	21.5	21.5	14.5	21.5
Total Split (s)	21.6	33.8	14.6	48.4
Total Split (%)	30.9%	48.3%	20.9%	69.1%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	None	Min	None	Min

Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 54.2
Natural Cycle: 70
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Cedar Av. & Durst Dr





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	115	47	1242	25	17	1166
Future Volume (veh/h)	115	47	1242	25	17	1166
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1700	1800	1800	1800	1700	1800
Adj Flow Rate, veh/h	121	49	1307	26	18	1227
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	206	84	1676	33	72	2143
Arrive On Green	0.19	0.19	0.49	0.49	0.04	0.63
Sat Flow, veh/h	1107	448	3519	68	1619	3510
Grp Volume(v), veh/h	171	0	651	682	18	1227
Grp Sat Flow(s),veh/h/ln	1564	0	1710	1787	1619	1710
Q Serve(g_s), s	4.8	0.0	15.2	15.2	0.5	10.1
Cycle Q Clear(g_c), s	4.8	0.0	15.2	15.2	0.5	10.1
Prop In Lane	0.71	0.29		0.04	1.00	
Lane Grp Cap(c), veh/h	292	0	836	874	72	2143
V/C Ratio(X)	0.59	0.00	0.78	0.78	0.25	0.57
Avail Cap(c_a), veh/h	555	0	1040	1087	339	3117
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.9	0.0	10.2	10.2	22.2	5.2
Incr Delay (d2), s/veh	1.9	0.0	3.1	2.9	1.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	4.2	4.3	0.2	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.8	0.0	13.2	13.1	24.0	5.5
LnGrp LOS	B	A	B	B	C	A
Approach Vol, veh/h	171		1333			1245
Approach Delay, s/veh	19.8		13.2			5.7
Approach LOS	B		B			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.6	28.0			34.7	13.5
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	10.1	29.3			43.9	17.1
Max Q Clear Time (g_c+I1), s	2.5	17.2			12.1	6.8
Green Ext Time (p_c), s	0.0	6.4			10.0	0.3

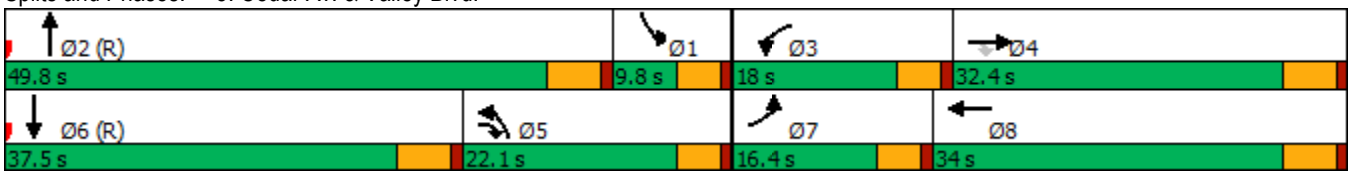
Intersection Summary	
HCM 6th Ctrl Delay	10.2
HCM 6th LOS	B

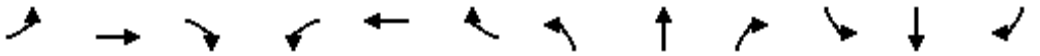
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	276	418	532	334	263	439	1393	97	1258
Future Volume (vph)	276	418	532	334	263	439	1393	97	1258
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.4	9.6	9.6	32.4	9.6	32.4	9.6	32.4
Total Split (s)	16.4	32.4	22.1	18.0	34.0	22.1	49.8	9.8	37.5
Total Split (%)	14.9%	29.5%	20.1%	16.4%	30.9%	20.1%	45.3%	8.9%	34.1%
Yellow Time (s)	3.6	4.4	3.6	3.6	4.4	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	4.6	5.4	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	C-Max	None	C-Max

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 104 (95%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Splits and Phases: 5: Cedar Av. & Valley Blvd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	276	418	532	334	263	73	439	1393	290	97	1258	81
Future Volume (veh/h)	276	418	532	334	263	73	439	1393	290	97	1258	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	288	435	403	348	274	64	457	1451	223	101	1310	78
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	317	600	616	360	524	120	678	1730	266	347	1384	82
Arrive On Green	0.11	0.18	0.18	0.12	0.19	0.19	0.23	0.40	0.40	0.12	0.29	0.29
Sat Flow, veh/h	2956	3420	1518	2956	2759	633	2956	4286	658	2956	4742	282
Grp Volume(v), veh/h	288	435	403	348	168	170	457	1109	565	101	905	483
Grp Sat Flow(s),veh/h/ln	1478	1710	1518	1478	1710	1682	1478	1638	1668	1478	1638	1749
Q Serve(g_s), s	10.6	13.2	6.5	12.9	9.7	10.0	15.5	33.6	33.6	3.4	29.7	29.7
Cycle Q Clear(g_c), s	10.6	13.2	6.5	12.9	9.7	10.0	15.5	33.6	33.6	3.4	29.7	29.7
Prop In Lane	1.00		1.00	1.00		0.38	1.00		0.39	1.00		0.16
Lane Grp Cap(c), veh/h	317	600	616	360	325	319	678	1322	673	347	956	510
V/C Ratio(X)	0.91	0.73	0.65	0.97	0.52	0.53	0.67	0.84	0.84	0.29	0.95	0.95
Avail Cap(c_a), veh/h	317	839	722	360	445	437	678	1322	673	347	956	510
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.65	0.65	0.65
Uniform Delay (d), s/veh	48.6	42.9	10.7	48.1	40.0	40.2	38.7	29.6	29.6	44.4	38.1	38.1
Incr Delay (d2), s/veh	28.5	1.9	1.7	38.4	1.3	1.4	2.6	6.5	12.0	0.3	13.8	21.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	5.6	4.2	6.5	4.1	4.2	5.7	13.7	14.9	1.2	13.3	15.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.0	44.8	12.4	86.5	41.3	41.5	41.3	36.1	41.6	44.7	51.9	59.6
LnGrp LOS	E	D	B	F	D	D	D	D	D	D	D	E
Approach Vol, veh/h		1126			686			2131			1489	
Approach Delay, s/veh		41.4			64.3			38.7			53.9	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	49.8	18.0	24.7	29.8	37.5	16.4	26.3
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Max Green Setting (Gmax), s	5.2	44.4	13.4	27.0	17.5	32.1	11.8	28.6
Max Q Clear Time (g_c+I1), s	5.4	35.6	14.9	15.2	17.5	31.7	12.6	12.0
Green Ext Time (p_c), s	0.0	6.3	0.0	3.3	0.0	0.3	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	46.6
HCM 6th LOS	D

Notes

User approved changes to right turn type.

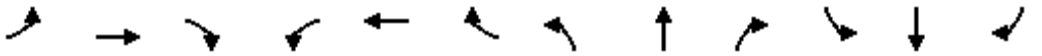
Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	445	696	1676	1393	731
Future Volume (vph)	2	445	696	1676	1393	731
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	14.6	27.4	25.4	25.4
Total Split (s)	43.0	43.0	28.0	67.0	39.0	39.0
Total Split (%)	39.1%	39.1%	25.5%	60.9%	35.5%	35.5%
Yellow Time (s)	4.1	4.1	3.6	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	4.6	5.4	5.4	5.4
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 6: Cedar Av. & I-10 WB





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	547	2	445	696	1676	0	0	1393	731
Future Volume (veh/h)	0	0	0	547	2	445	696	1676	0	0	1393	731
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				582	2	452	740	1783	0	0	1482	573
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				613	2	540	747	2039	0	0	1610	499
Arrive On Green				0.34	0.34	0.34	0.43	1.00	0.00	0.00	0.31	0.31
Sat Flow, veh/h				1804	6	1590	3510	3705	0	0	5358	1609
Grp Volume(v), veh/h				584	0	452	740	1783	0	0	1482	573
Grp Sat Flow(s),veh/h/ln				1810	0	1590	1755	1805	0	0	1729	1609
Q Serve(g_s), s				34.6	0.0	28.9	23.0	0.0	0.0	0.0	30.3	34.1
Cycle Q Clear(g_c), s				34.6	0.0	28.9	23.0	0.0	0.0	0.0	30.3	34.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				615	0	540	747	2039	0	0	1610	499
V/C Ratio(X)				0.95	0.00	0.84	0.99	0.87	0.00	0.00	0.92	1.15
Avail Cap(c_a), veh/h				624	0	548	747	2039	0	0	1610	499
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.43	0.43	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				35.4	0.0	33.5	31.5	0.0	0.0	0.0	36.6	37.9
Incr Delay (d2), s/veh				24.2	0.0	10.8	19.4	2.5	0.0	0.0	10.1	87.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				18.8	0.0	12.4	9.0	0.7	0.0	0.0	13.6	24.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				59.6	0.0	44.4	50.9	2.5	0.0	0.0	46.7	125.6
LnGrp LOS				E	A	D	D	A	A	A	D	F
Approach Vol, veh/h					1036			2523			2055	
Approach Delay, s/veh					52.9			16.7			68.7	
Approach LOS					D			B			E	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	67.5		28.0	39.5		42.5						
Change Period (Y+Rc), s	5.4		4.6	5.4		5.1						
Max Green Setting (Gmax), s	61.6		23.4	33.6		37.9						
Max Q Clear Time (g_c+I1), s	2.0		25.0	36.1		36.6						
Green Ext Time (p_c), s	23.5		0.0	0.0		0.8						

Intersection Summary		
HCM 6th Ctrl Delay	42.4	
HCM 6th LOS	D	

Notes

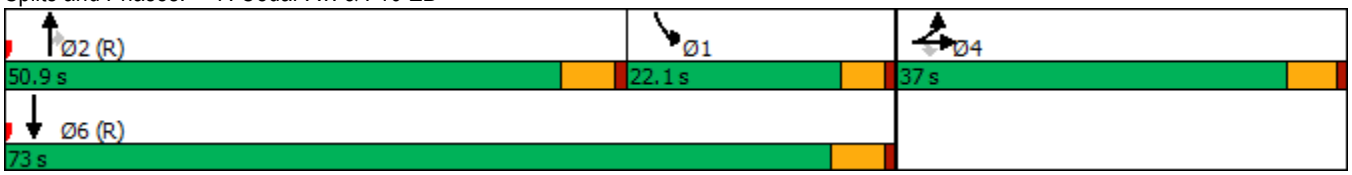
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	627	7	473	1746	776	425	1514
Future Volume (vph)	627	7	473	1746	776	425	1514
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	4	4		2		1	6
Permitted Phases			4		2		
Detector Phase	4	4	4	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0
Minimum Split (s)	20.0	20.0	20.0	30.4	30.4	9.6	25.4
Total Split (s)	37.0	37.0	37.0	50.9	50.9	22.1	73.0
Total Split (%)	33.6%	33.6%	33.6%	46.3%	46.3%	20.1%	66.4%
Yellow Time (s)	4.1	4.1	4.1	4.4	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.4	5.4	4.6	5.4
Lead/Lag				Lead	Lead	Lag	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 68 (62%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 7: Cedar Av. & I-10 EB



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	627	7	473	0	0	0	0	1746	776	425	1514	0
Future Volume (veh/h)	627	7	473	0	0	0	0	1746	776	425	1514	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1876	1876	1900	1900	0
Adj Flow Rate, veh/h	822	0	329				0	1857	656	452	1611	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	935	0	416				0	2119	649	644	2333	0
Arrive On Green	0.26	0.00	0.26				0.00	0.41	0.41	0.37	1.00	0.00
Sat Flow, veh/h	3619	0	1610				0	5292	1568	3510	3705	0
Grp Volume(v), veh/h	822	0	329				0	1857	656	452	1611	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1708	1568	1755	1805	0
Q Serve(g_s), s	24.0	0.0	21.0				0.0	36.7	45.5	12.1	0.0	0.0
Cycle Q Clear(g_c), s	24.0	0.0	21.0				0.0	36.7	45.5	12.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	935	0	416				0	2119	649	644	2333	0
V/C Ratio(X)	0.88	0.00	0.79				0.00	0.88	1.01	0.70	0.69	0.00
Avail Cap(c_a), veh/h	1050	0	467				0	2119	649	644	2333	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.24	0.24	0.00
Uniform Delay (d), s/veh	39.1	0.0	38.0				0.0	29.7	32.3	32.3	0.0	0.0
Incr Delay (d2), s/veh	8.1	0.0	8.1				0.0	5.5	38.2	0.8	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	0.0	9.0				0.0	15.2	23.0	4.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.2	0.0	46.1				0.0	35.1	70.5	33.1	0.4	0.0
LnGrp LOS	D	A	D				A	D	F	C	A	A
Approach Vol, veh/h		1151						2513			2063	
Approach Delay, s/veh		46.9						44.4			7.6	
Approach LOS		D						D			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	25.6	50.9		33.5		76.5
Change Period (Y+Rc), s	5.4	* 5.4		5.1		5.4
Max Green Setting (Gmax), s	17.5	* 46		31.9		67.6
Max Q Clear Time (g_c+I1), s	14.1	47.5		26.0		2.0
Green Ext Time (p_c), s	0.6	0.0		2.4		19.7

Intersection Summary		
HCM 6th Ctrl Delay		31.6
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 8.1:

SBCTA SCREENING TOOL

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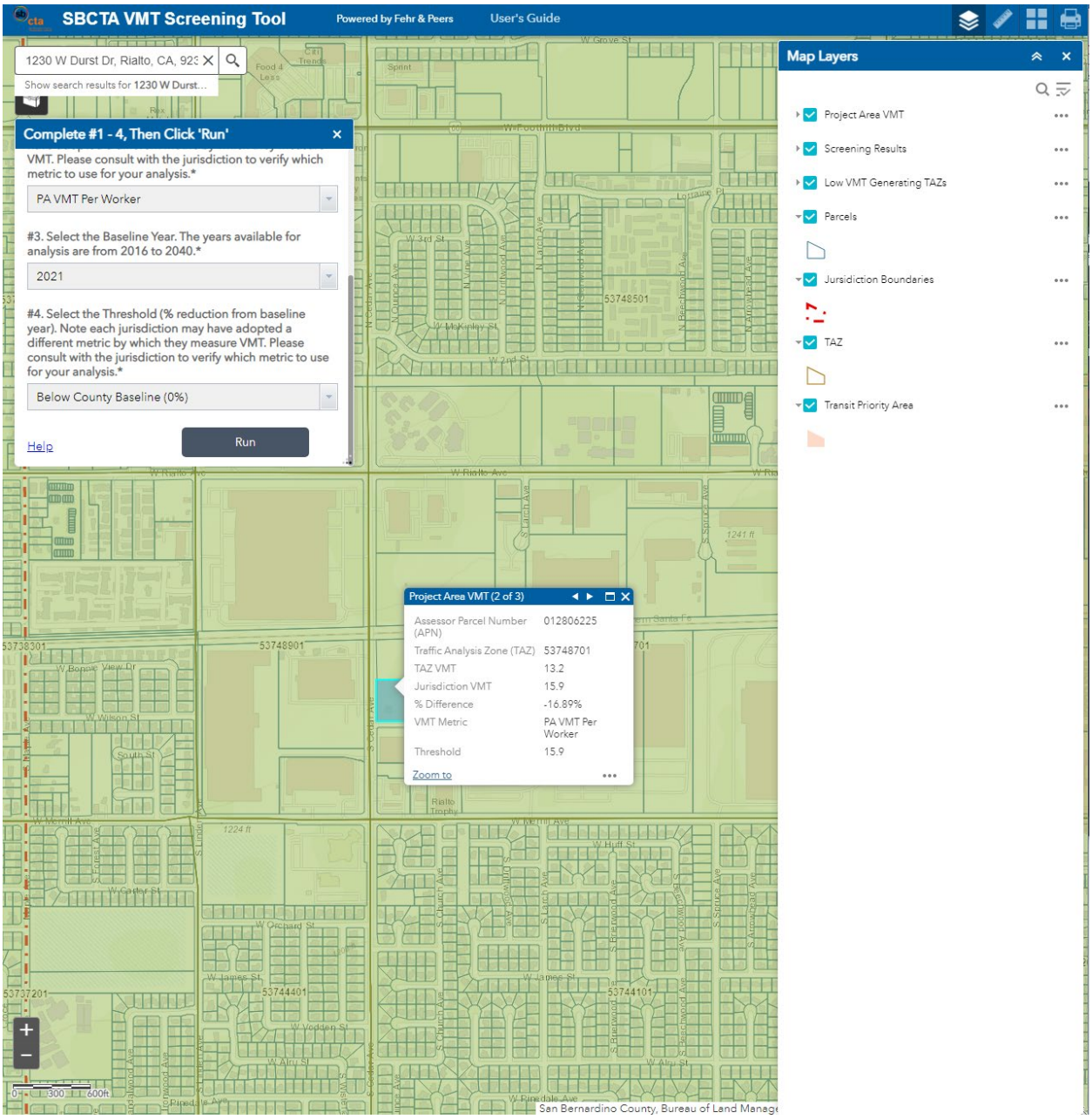
SBCTA VMT Screening Tool
Powered by Fehr & Peers
User's Guide
1230 W Durst Dr, Rialto, CA, 923
Show search results for 1230 W Durst...
Complete #1 - 4, Then Click 'Run'
VMT. Please consult with the jurisdiction to verify which metric to use for your analysis.*
PA VMT Per Worker
#3. Select the Baseline Year. The years available for analysis are from 2016 to 2040.*
2021
#4. Select the Threshold (% reduction from baseline year). Note each jurisdiction may have adopted a different metric by which they measure VMT. Please consult with the jurisdiction to verify which metric to use for your analysis.*
Below County Baseline (0%)
Help
Run
Map Layers
Project Area VMT
Screening Results
Low VMT Generating TAZs
Parcels
Jurisdiction Boundaries
TAZ
Transit Priority Area
Project Area VMT (2 of 3)
Assessor Parcel Number (APN) 012806225
Traffic Analysis Zone (TAZ) 53748701
TAZ VMT 13.2
Jurisdiction VMT 15.9
% Difference -16.89%
VMT Metric PA VMT Per Worker
Threshold 15.9
Zoom to
53748501
53748901
53738301
53737201
53744401
53744101
1241 ft
1224 ft
San Bernardino County, Bureau of Land Manage

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